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COFFIN'S

BOTANICAL JOURNAL

AND

MEDICAL REFORMER.

"HUMAN EXPERIENCE, WHICH IS CONSTANTLY CONTRADICTING THEORY, IS THE GREAT TEST OF TRUTH."—DR. JOHNSON.

VOLUME VII.

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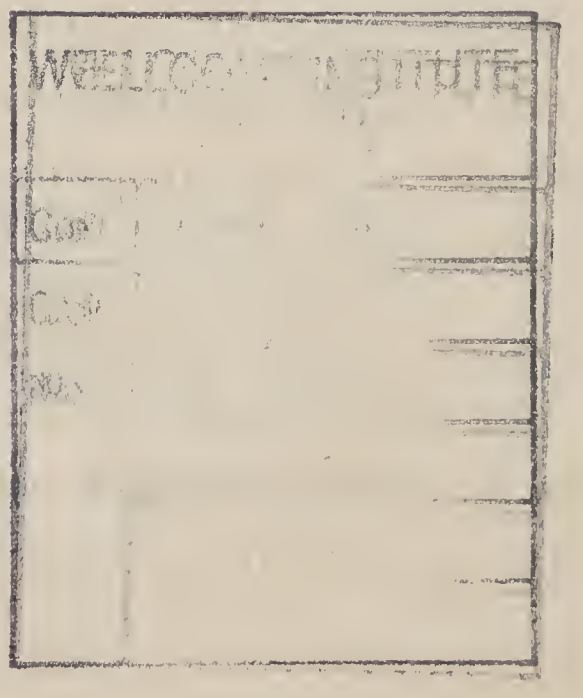

PREFACE TO THE SEVENTH VOLUME.

Progress is the watchword of the age. The men of intelligence and energy help forward the great movement of the day, and carry the tardy and obtuse by the irresistible impulse they give. The sciences are developing results which would have startled the inhabitants of this earth in the beginning of the last century. Medicine, considered as a science, is almost the only exception. Even the science of surgery has progressed to a far greater extent than that of medicine, though this has been comparatively slowly. Other sciences have been neither encumbered with legal enactments, nor fettered by a monopolising selfism; but medicine and surgery have never been allowed to make an independent stride towards improvement, without being snubbed and checked by the Legislature. Ponderous folioes of legislative enactments have been passed and printed for the express purpose of depriving these sciences of their native elasticity and tendency to expansion. Hence Medical Botany has been continually under the pressure of a tyrannical control, and though, in spite of this unjustifiable interference it has made rapid progress, yet its influence on this country would have been universal, had not interested parties used all the appliances at their command to work upon the prejudices of the population to arrest its advancement.

The present volume of the Botanic Journal shows, that notwithstanding the efforts made in some directions to suppress Medical Botany, it is rapidly gaining the confidence of the people. The triumphs of the past are the pledges of future success. The

experience of the afflicted is the best commendation to the remedies which have proved efficient in restoring health and removing pain.

Some of the agents have at length complied with the oft-repeated suggestions of the Editor, to prepare statistics of the cases which have come under their immediate notice, and it is hoped that many others will speedily follow their example. Should this be the case, Medical Botanists will be in a position to bring before any impartial jury, evidence which cannot fail to secure a verdict in favour of the system they uphold. The battle of words will pass away in thin air, but the battle of facts must have a victory on one side, and a defeat on the other, so palpable and lasting, that they will need no monuments of marble nor tablets of brass to commemorate them.

If therefore, the Legislature shall continue to occupy its attention, and employ its time, in making laws to govern the administration of medicine, and encumber the statute-book of England with enactments in favour of a monopoly, the people will have a case, and may fairly petition to be heard at the bar of the House, or in committee. Statistics will then be valuable. Medical Botanists may safely challenge the allopaths to meet them—statistics against statistics, and the most rigid scrutiny on both sides. There have been numerous facts showing the success of Medical Botany: many of them are to be found in the correspondence of the former volumes, but if these had been put in the form of statistics, they would be available for any great national purpose, and at any time.

During the progress of this volume, THE GUIDE TO HEALTH has become the family adviser in many large domestic circles; and not a few instances have occurred where disease has been speedily arrested, and lives spared from the torture of allopathic medicines and death. Independently of the great saving of expense to families, there is the higher satisfaction of having simple remedies

at hand, which inspires confidence in saving beloved and valuable lives. These are benefits which Medical Botany more extensively diffuses every year, and greatly contributes to diminish the amount of mortality in the country.

We earnestly invite our readers to call the attention of their friends and neighbours to the subject of Medical Botany, and if possible to get them to become constant readers of this Journal. Its price is moderate, its information is valuable, its subjects various, and its design benevolent, seeking to promote the health and long life of our fellow men.

THE EDITOR.

June 27, 1857.

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'Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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PREJUDICE THE IMPEDIMENT TO PROGRESS.

Some two centuries and a half ago, it was no uncommon occurrence, even in this land of freedom-loving people, to find that any man, who made advances in the knowledge of science, surpassing his more tardy and less gifted countrymen, was either stigmatised as a wizard, or shunned as a correspondent with evil spirits. This was the manifestation of a spirit of prejudice, which checked the ardent aspirations of genius and prevented the benefit of the onward progress of mind. Mind did work, and mind did progress, but all its workings and all its progress were pent up in the seclusion of the study, and hidden from the sight of men, lest they should expose the independent thinker to secret reproach, or open infamy. Lord Francis Bacon, the subverter of the Aristotelean philosophy, encountered a large amount of opprobrium, on account of his manly and vigorous, but novel theories. Had he had less influence at court, he would most certainly have suffered much more severely than he did, for his temerity in advancing opinions so directly opposed to the popular philosophy of that day. It would not be difficult to furnish a long list of names of those who paid either the price of their liberty, or their life, for their boldness in avowing results at which they had arrived in their scientific studies. The chemist especially suffered for the experiments he made in his laboratory, and if he dared to make known his skill and power in transmuting substances, such as changing vapours into solids, solids into fluids, or colourless fluids into distinct and brilliant colours, he was suspected of demon-dealing, and treated as the dread and terror of the neighbourhood. These are among some of the things which once were—the things which belonged to the dark ages, and with them have passed away. The experiments of chemistry are now mixed up with the amusements of the million, and are appreciated by the few, as marks of the advancement of science. But the same spirit of prejudice which persecuted the chemist of 1600, is still hanging about our country, and hunting up victims in the present day. Though not armed with the full power of inflicting pains and penalties, fines and imprisonments, yet even now it has its penal instruments, which are frequently so decked and adorned as to make the vulgar wish to handle them—instruments which pass from hand to hand most rapidly: they are slander, calumny, depreciation and falsehood. These weapons have always been employed to arrest the progress of truth, and to prevent the mental and moral vision of the multitude.

What are the results of prejudice in the present day? A love for stereotyped thinking—a preference of things worthless, because they are old—an admiration of anything which has but the sanction of some influential name—and a rejection of everything, however intrinsically excellent. If prejudice kindly smile on the veriest dolt which happened to wear human shape and have human voice, there are always some thousand observers ready to mimic the expression of her countenance,

without the trouble of inquiring, "Why?" The influence of prejudice in the medical profession is most palpable, either to elevate a man with the rapidity of a rocket, or to sink him like a millstone in the sea. An anecdote will best illustrate this statement. A druggist, residing in a town in one of the midland counties, was plodding on his even way, keeping his shop-window in good order, early in the morning, making up pills, mixtures, draughts, plasters, &c., according to prescriptions from a neighbouring physician. It so happened that a certain countess, while walking near this druggist's shop, fell down with an attack of *hysteria;* the druggist was prompt and kind in his attentions, administered an effervescent draught, and having sent the countess home under the care of her attendant, called twice that day to inquire after his noble patient. He was honoured with an interview on both occasions. Soon after, the countess returned to her town residence. The countess was taken ill, and sent for the country druggist. A paragraph relating this fact was inserted in all the local papers. The druggist soon placed a shopman behind his counter, had his private residence, saw patients as quickly as possible in the morning, paid professional visits in the afternoon, rapidly acquired property, bought land, advised all his patients to seek a residence near his own, as the most healthy locality within a hundred miles. His advice took, very much to the damage of neighbouring landowners, as his extraordinary practice greatly injured many learned and skilful physicians who resided in that vicinity. Here was prejudice suddenly raising one man and sinking many far more deserving men.

In the same way prejudice is acting towards men who have neither skill nor power to inspire or merit confidence; but being patronised by some influential name, people rush to seek their advice. And though numbers of patients die under their treatment, still people obstinately adhere to them, and refuse the medicine which restores and revives all who will use it.

We shall conclude this paper by just referring to a few practical illustrations of the exercise of prejudice, which have recently come under our immediate notice. One case of a young lady, who had had the advice of some of the most celebrated physicians in the metropolis, and had obtained but temporary relief: she continued to spit blood, lose flesh, and grow weaker and weaker every day. A friend advised her to put herself under the care of Dr. COFFIN, and though she seemed inclined to attend to the advice of her friend, she was prevented by the interposition of her brother, who said, "He had heard so much against those COFFINITES, that he would never consent to any relatives of his being subjected to the treatment of Medical Botany." Here was prejudice preventing a sister from obtaining health, at a time when disease was making fearfully rapid progress. Her friend ventured to give a prescription upon the Botanic System: the lady took it, and has since given the best possible proof of being in restored, sound health. Another case was that of a poor woman, who sought the medical advice of the writer; but immediately he proposed to give her a letter of introduction to Dr. COFFIN, instantly exclaimed, "Oh! I have heard that he kills a great many more persons than he cures, and I could not go to him." No talking, no reasoning, no enumeration of facts could remove the powerful influence of prejudice under which she was labouring. The last case which we shall here adduce, is one of still more surprising character than the two former. A lady of education and superior mental powers had so yielded to the influence of prejudice, that though she had seen her husband in the most perilous position, when his reason and his life seemed to hang upon a very slender thread, yet, by the Botanic Medical treatment, she saw him recover to the enjoyment of robust health, protested that, if she should ever be ill, she could not think her life safe in Dr. COFFIN'S hands; and by this protest she continued to abide, though, in addition to her husband's recovery, she saw two of her own children, afflicted with scarlet fever, restored to health, entirely, solely and entirely, by the treatment which Medical Botany prescribes! The mind which will not yield to evidence like that now adduced, must be the victim of prejudice.

A PILL FOR PARLIAMENT.

(From Punch.)

The Medical Bill seems to be such a very disagreeable dose that the House of Commons cannot swallow it; and, by way of throwing physic to the dogs, they have pitched the measure to a select committee, where the bone of contention will be picked to pieces, and there will be an end of it. The alleged intention of the measure is to put down quacks; but, even if the Bill were to limit the profession to what are called legally qualified practitioners, there would still be an abundance of quackery. We can see no difference between the vendor of a patent pill for curing every disease, and the family doctor, who continues to send medicine which he knows will do no good, for the mere purpose of running up a bill, in which "Mixture—Master John," shall be repeated some twenty or thirty times, at three shillings a bottle; and "Pill and draught—Miss Eliza," shall run through a page-and-a-half of foolscap, at eighteenpence per item. There is surely a large amount of quackery about the learned practitioners—so abundant in the suburbs of London—who are always powdering and pilling the families into which they gain admission; who address childish inquiries to the baby as to its little "tonguey pungy;" and promise to send the unhappy infant some "nicey picey," for which they intend to "chargey pargey," to a tremendous "summy pummy."

We are quite sure that legislation would be as well employed in guarding against the more specious quacks, who get into one's house under the guise of regularly qualified medical men, as in attempting to protect those simpletons who will go on swallowing cures for every disease, and rubbing in ointment by the half-hundred weight, on the faith of some miraculous restoration of some mythic leg of some imaginary Guardsman. Everybody knows, that in the medical, as in every other profession, he is always called a quack who makes the first bold step out of the ruts of routine; and the most rapid advances in any science are due to the men, who, in their own days, were always denominated quacks by those who were being left in the background. We would support any measure of medical reform which should really be calculated to put down quackery; but, in trying to first "catch your quack," it is as reasonable to look for him in the ranks of the regularly qualified practitioners, as among the advertisers in the newspapers. Examinations are very proper things to regulate admission to the medical profession; but such precautions will not guard against quacks; who become so, not on account of what they know, or what they do not know, but on account of their pretending to knowledge they do not possess, or making an improper use of such knowledge as they can really boast of.

THE NERVOUS SYSTEM.

(Continued from page 377, vol. VI.)

From the upper and lower portions of the spinal cord where the nerves branch off to supply the extremities, a number of the branches of the nerves unite and interweave with each other, and form a kind of net-work, called a *plexus* of nerves.

The four lower cervical and first of the dorsal nerves, unite to form what is called the *brachial* or arm plexus; from which, among other important branches, proceed the nerves for supplying the upper extremities; distinguished as the *median*, *radial* and *ulnar* nerves.

The dorsal nerves divide into anterior branches and posterior branches; the former supplying the intercostal muscles, and the latter supplying the external muscles and skin of the back.

The lumbar and sacral nerves also unite and form plexuses or ganglia, from which, among other branches, proceed the nerves for supplying the lower extremities. The chief branch formed by this union, is the great *ischiatic* nerve, the largest in the body; it separates about midway down the thigh into two branches, called the *tibial* and *peroneal* nerves. Thus far we have attempted to name and arrange the nerves of sensation and motion; but there is another class of nerves called—

The Sympathetic System, which belongs to what is called our organic

life, and is usually considered as a distinct set of nerves, yet having a communication with the other nerves of the body. It consists of a series of branches and ganglia, forming a kind of nervous chain, down each side of the spinal cord; and connected with a number of branches and ganglia supplying the various internal organs. Each branch or ganglia derives its name from the organ it supplies, such as the palatine, naso-palatine, maxillary, sub-maxillary, cardiac, hepatic, splanchnine, renal, spermatic, hypogastric, &c.

It is almost impossible to describe the structure of nervous matter. By the assistance of the microscope, it is found that the *gray* or *cineritious* substance, consists of myriads of exceedingly small cells and granules of different sizes, held together by a minute net-work of blood-vessels. The *medullary* substance is made up of numerous bundles of exceedingly fine tubes, containing a colourless fluid; each bundle enclosed in a thin membrane, and the whole held together by means of a delicate tissue. These tubes can be traced in the fibrous substance of the brain; some of them diverging from the upper portion of the spinal cord towards the convolutions, and some proceeding from the surface of the brain, and converging to the substance of the spinal cord.

The nervous tubes seem to pursue an uninterrupted course from their origin to their termination, which is generally in the form of very small loops. The nerves of sensation distributed to the surface of the body, generally terminate in minute conical points called *nervous papillæ*, formed by the little loop-like filaments of the nerves pushing up from beneath the outer membrane of the skin, each *papilla* being also supplied with minute bloodvessels. Over the general surface of the body, the *papillæ* are small and irregularly disposed; but on the palms of the hands and the extremities of the fingers they are large and prominent, arranged in parallel rows, forming the minute ridges seen on those parts.

The sense of touch is produced by contact with the thing felt, and is heightened by our attention towards it: when the nervous papillæ, from being flaccid, are seen to become excited, and to extend themselves, as if to gather information of its qualities. The sense of touch is weakened by cold, or by any other cause which prevents the nervous papillæ from receiving the necessary supply of pure blood.

We shall give in our next some directions for the treatment of the nerves, so as to preserve their healthy tone, or to invigorate them when enfeebled: for there are but few persons who do not need this advice, or who would not derive benefit from the tonics which botanic medicine prescribes.

MELANCHOLY CASE OF ACCIDENTAL POISONING.

Captain Aquilla Howe Kent, of the 4th Lancashire Militia, has been accidentally poisoned. An inquest was commenced upon the body on Monday, February 25th, at the Newry Barracks. George Woodward, the servant of the deceased, deposed that he got medicine three times for deceased at a Dr. Connor's; first about a fortnight since, when he got a bottle containing a mixture from Dr. Connor's son, Mr. Samuel Townley Connor; upon that occasion witness got a paper from his master, who directed him to carry it to Dr. Connor's and get the medicine which it authorised. Witness carried the envelope and gave it to Dr. Connor's son, who read the writing inside, and gave him a bottle which he delivered to his master; there was a label on the bottle, which was, "Dr. Connor, Newry. The mixture, a dessertspoonful, mixed with soda-water, an hour before breakfast, and an hour before dinner daily. Captain Kent." Witness gave both the bottles and the envelope back to his master; was in the habit of getting soda-water from the mess-room for deceased; never saw deceased taking any of the mixture, but was accustomed to wash the glass in which the medicine used to be poured; he subsequently took a paper to Dr. Connor's, and got a box of pills from Mr. Connor; can't say it was the one which he first took. The witness then continued: On Saturday evening last, about eight o'clock, my master directed me to take that bottle down to Dr. C.'s, and get it filled with

the same medicine as he had had; he did not give the paper or anything but the bottle, which was the same that I had before, and which I first got at Dr. Connor's. I took the bottle to Dr. Connor's, and told the same man I first saw to fill it with the same medicine as I had got before for Captain Kent; he looked on the file among the papers on it, and Mr. Connor said to another man, younger than Mr. Connor, behind the counter, that he could not find it, but the other man said he knew what it was; the other man told him something, but I could not understand what it was; it was descriptive of a medicine which I can't name, nor can I remember any portion of what he did say; I then said to Mr. Connor that I would call again for it, and to make it up while I was away; I did not hear him say anything; I then left the shop and returned in about twenty minutes; Mr. Connor, and the other person referred to, were in the shop when I came back, and there was a bottle on the counter wrapped in paper; I asked Mr. Connor if that was mine, and he said yes; I pointed to the bottle; there was nothing more said, and I took up the bottle and came to the barracks direct; I saw my master in his own room alone when I came back; he was sitting down; I told him I brought the bottle, and he said "very good;" I laid the bottle on his table, and withdrew; I did not see him any more that night; next morning (Sunday) I went into his room at eight o'clock; he was in bed, and before I had the room settled, he rose and dressed; I next saw him about one o'clock in his own room; the paper was on the bottle until this morning untouched and untied; it was just as I brought it; when I went into my master's room this morning at seven o'clock, I saw the bottle, and it was then unopened; I left the room then, and when I came back I saw my master in his night-dress; my master told me to take three empty bottles, which had contained soda-water, to the mess, and bring three full ones; I did so; I found my master there on my return; I did not see him do anything to the bottle that I had brought him from Dr. Connor's; before he got up I saw it in the window wrapped up; I was absent the first time from my master's room about a quarter of an hour, and then returned; my master was then washing in his dressing-room; I did not go into it; my master then asked me who gave me that medicine, and I said the same man as before; he said, "I am afraid they gave you the wrong medicine;" he said it tasted nasty—that they should be particular, as they might poison a person. William Henry Bone, Assistant Surgeon of the regiment, said: This morning, about a quarter before nine, I was passing the window of deceased's dressing-room; he tapped at the window; I went back to him, being still outside, and he came out to me; he said to me, "I have been taking some medicine" (producing a bottle, of which those are the remains) "that I got made up in town; it has got a very nasty taste;" he showed me the bottle; I took it in my hand and smelled it; I also tasted it; it had very little taste at the moment, but after a time a burning taste; I told him I was going to see a sick man, and I would be back to him in a very few minutes; he said, "Very well; don't be long;" whilst I was seeing the man, the peculiar burning sensation developed itself; I ran back immediately to his room, and he was not there; I went into my own room, and, in about two minutes after I got in, Mr. Kent came to the door; I asked him how he felt; he said his legs seemed as if they were going away from him; I gave him a cup of strong coffee, which was ready at the time; he drank it, stood up, and attempted to spit into the fire, and tumbled; he was caught before he reached the ground, and, with the assistance of a brother officer, and my servant, we got him to bed; I called Mr. Britson to help me; my servant was there during the whole time; I gave him an emetic, consisting of sulphate of zinc; I sent for it to the surgery; after taking it he vomited about a pint of greenish stuff; that is preserved; I then gave him another emetic of the same; between the administration of the first and second emetic he complained of cold in the back and feet, and hot bottles were applied; I then sent for the surgeon, Mr. Whitehead, who soon came; the second emetic, as well as some brandy and ammonia, were administered; I told the surgeon what

had been done, and showed him the bottle from which the deceased said he had drunk; it was then whole, and had a quantity of fluid in it; there were about two ounces, and the colour was dark-greenish; I then gave it into the surgeon's hands; he approved of all that had been done by me, and directed that I should immediately apply mustard poultices to the chest and the spine, and instead of five grains of ammonia I was to give him ten—the ammonia to be administered in brandy; the surgeon took the bottle and left; before he left we came to the conclusion that the deceased had taken poison. After the surgeon had left, deceased requested I would go and inform the colonel of his state; the colonel directed that the surgeon be sent for, and suggested that Dr. Morrison be called in; soon after we got into the room where deceased was, the surgeon came in; previous to that, he had a convulsive fit, and as the surgeon came in he was gasping and evidently dying; he never rallied, and died between twenty and twenty-five minutes after ten o'clock; that is, about an hour and a half after he tapped at the window. On Tuesday, Thomas Byron Whitehead, the surgeon of the regiment, was first called. After confirming what had been stated on the previous day, witness proceeded: I went to Dr. Connor's shop to ascertain the medicine deceased had had sent to him. I saw two young men behind the counter, and shortly after a third came in; one of those three persons is now present—Mr. Samuel Townley Connor; I asked the first two whom I saw, "Will you oblige me by showing me a copy of the prescription for the medicine sent to Captain Kent?" I don't remember any reply having been made; but one of the young men, the elder of the two (named M'Call), took down a file, and showed me a paper on it; I read the paper, which I now hold in my hands, it is as follows—"Captain Kent; tincture of the root of aconite and syrup of sarsaparilla—of each an ounce and a half—mix;" that is the whole of the paper, and there is no date to it; while I was examining the paper, Dr. Connor's son came up into the shop; I asked, without addressing any one in particular, "Is this a correct copy of the prescription of the medicine for Captain Kent that had the effect of prostrating him?" Dr. Connor's son, Samuel Townley Connor, said, "It is a correct copy;" I asked if he had made it up, and he replied, "Yes;" I then asked if Dr. Connor was in, and was told no. I have made a *post-mortem* examination this morning, in the presence of Dr. Bone and Dr. Morrison. In my opinion, death was caused by a poison taken into the stomach, and acting directly on the nervous system, and stopping the action of the heart; the particles on the surface of the stomach were of a dark-red colour; I think the stomach had been so thoroughly cleansed of the contents, that it would have been quite impossible to detect the presence of aconite there; I was not able to discover it in any other portion of the viscera; the venous blood found on the right side of the heart would be caused by the inability of the heart to perform its functions; the tincture of aconite has a smell; I can't say that I discovered the smell of aconite at all, for the reason before stated; it is a vegetable poison; I remarked, in Dr. Bone's room, an utensil, two-thirds full of dark-greenish matter; I did not see deceased discharge it, but, from its appearance, I should say it had been thrown off deceased's stomach; it had the odour of aconite. A proper dose of the tincture of aconite for a man is five drops, but even then it must be given with caution; it is seldom used internally, on account of its effect on the nervous system; a dessertspoonful is directed to be taken, by the label on this broken bottle, twice a day, an hour before breakfast, and an hour before dinner: the half of that spoonful would be aconite, if that tincture was given; which, if taken as directed by that label, would, I have no hesitation in stating, poison a man. Dr. Morrison examined: I attribute death to the taking of vegetable poison; I remember having been in the shop of Dr. Connor yesterday; I saw Mr. Samuel Townley Connor there; I asked him, in Dr. Whitehead's presence, to show me a copy of the prescription from which he made the medicine sent to Captain Kent; he immediately, without any hesitation, went to the file, and gave it to me; that is the paper which Mr. Connor gave me; I have no doubt about

it ; I said nothing more, and nothing else of any importance occurred; I don't know the handwriting, but the same ingredients are here, and it is in the same handwriting as that in the paper I saw yesterday in Dr. Connor's shop ; I then handed the paper to Dr. Whitehead ; I have no cognisance of any one else having been in the shop at the time.—The jury then retired, and, after about an hour's consultation, delivered the following verdict: "That Aquilla Howe Kent came to his death, on the twenty-fourth day of February, by reason of his having drunk a quantity of poisonous drug, called aconite, negligently supplied to him by Samuel Townley Connor, aided and assisted by James M'Call." The jury also recorded their opinion upon the evidence to the following effect: "We, the jurors empannelled on the inquest this day, held on the body of Aquilla Howe Kent, Captain of the 4th Royal Lancashire Militia, who came by his death by having used a poisonous drug negligently administered in mistake for a different medicine, are unanimously of opinion, that no persons should be permitted to dispense or compound medicine except those whose education and qualification enable them to distinguish between the relative properties of medicines generally." The verdict being tantamount to one of manslaughter, the coroner made out his warrant for the committal of Mr. Connor and Mr. M'Call, who were accordingly conveyed to Armagh Gaol, to abide their trial at the ensuing assizes.

GARDEN FLOWERS OF APRIL.

(Continued from page 393, vol. VI.)

THE white and blushing blossoms of the fruit-trees render the April garden a grove of flowers. Among the most abundant and the brightest in tint, are the apple-blossoms, which thicken and redden until by the close of the month their redness turns to paleness. The apple which they produce is among the most valuable of British fruits; and as the tree may be grown in any soil or climate, and will bear its bright blossoms and its ruddy store for many years, it is not surprising that it should be so generally cultivated. Though only twenty-two kinds of apple were known to the Romans, several hundred varieties are now reared in this land. The blossoms of none are more beautiful than those of the Siberian crab *(pyrus prunifolia)* which is now in flower, and the small cherry-like fruits of which, though harsh to the taste, are the most deeply coloured and ornamental of any of the species.

That this tree was cultivated by the ancient Britons in the earlier days of this country, there is little doubt. Our English name for the fruit seems to have been derived from the Saxon aeppel, while the cider made from its juice is a slight abbreviation of the name of seider, given by the early Britons to some beverage which they had in common use. In later days the apple-juice has been used as a cosmetic, and the old physicians estimated its odour so highly that they often directed their patients to hold in their hand "a sweet apple," as a remedy in some of those alarming infections, which, like the plague, once preyed upon the inhabitants of this land.

Some very ornamental trees of the pear kind are now putting forth their blossoms, and are cultivated by our gardeners for their beautiful flowers. A species of pear *(pyrus salvifolia)* with downy leaves, something like those of the sage, and with white flowers, is one of the prettiest kinds. Several of these plants have long, silvery-white leaves, others narrow, silky leaves, like the willow; while one species *(pyrus nivalis)* has round leaves, as white as its snowy flowers. These trees are beautiful in form, but their fruits are not fit for eating. The ornamental plum-trees, too, are numerous, with their white flowers; and the pretty flowering shrubs of the cherry-tree tribe, have a good effect in the garden or shrubbery. Several of them have large double flowers. One kind of cherry, the perfumed cherry-tree *(cerasus mahaleb)*, often found in gardens, has a sweet scent, like that of the clematis, which is perceptible at a considerable distance. Its hard, round fruit is used for beads by Catholics, and the wood is scented by the French, and manufactured into various articles of furniture. The manufacture is carried on chiefly at the village of St. Lucie,

near Commercy, and hence this wood is called by the French, *bois de St. Lucie.* With us the tree is planted for its profuse and fragrant flowers.

"Shade-loving hyacinth, thou comest again,
And thy rich odours seem to swell the flow
Of the lark's song, the redbreast's lovely strain,
And the stream's tune."

Thus sang Elliott to our woodland hyacinth, which now is blooming. Our garden hyacinths are much like the wild species, but are double, and have a variety of tints. Some are dark blue or pale azure, others are of pink, amethyst, white, or primrose colours. This flower is the eastern hyacinth *(hyacinthus orientale).* It has long shed its beauty on the in-doors' room, from the water-vase, and now flourishes freely in the open air. It has one advantage when grown in the water above its growth in the ground, inasmuch as we can there see the fibres from the root, which are almost as beautiful as the flower itself, while, in the garden, these are concealed from our view. A variety of names have been given by florists to these favourite flowers. The species thought to have been earliest introduced into our gardens is that called the King of Great Britain. Like the tulip and narcissus, this flower has been much cultivated by the Dutch, and is still among them an article of commerce with other nations. They were the first European cultivators of the hyacinth, and raised it in their gardens as early as the commencement of the sixteenth century. About the latter end of that century, there were seven or eight varieties known in England, while Miller says that in his time—rather more than a hundred years ago—the Haarlem florists had above two thousand kinds. The passion for hyacinths which once existed in Holland, has, like many other popular follies, greatly subsided; but the beauty of the flower will ever make it valuable; and above four hundred kinds are annually brought into England, by seedsmen, from Holland. The garden hyacinth is a native of the Levant and of several parts of the east. It grows wild in abundance in some parts of Syria, flowering in February, and its roots and blossoms are much larger than those with us. It is said to be very beautiful on the lands lying by the coast of the Jordan, from the Dead Sea. Schubert, describing his course from this part of Syria, along the border of the Lake of Gennesaret, says, "Whoever desires views really extensive and beautiful, and lilies, tulips, hyacinths, and narcissuses, must in the spring season visit this district, where also the garlic assumes a size and beauty which might render it worthy of becoming an ornamental plant in our gardens."

In Russia the hyacinth has been found wild, with bells of deep yellow. The roots of all species of hyacinth are more or less poisonous. This flower is much admired in the east, and some years since, the favourite apartment of the Sultan at Constantinople was called the chamber of the garden of hyacinths. Dr. E. D. Clarke contrived to gain admittance into this retired spot. He describes it as a small garden, neatly arranged in a number of oblong borders, edged with porcelain or Dutch tiles. Not a flower was to be seen in this cherished parterre, save the Eastern hyacinth, and this waved its thousands of bells; but, by its monotony, the garden was rendered less pleasing than gardens in general, and had a dreary and unvaried aspect. One would have imagined that the powerful odours from a garden of hyacinths, borne upon the warm air of the south, would have rendered the neighbouring apartment neither healthful nor agreeable; yet here, gazing upon the flowers, the Sultan spent a great part of his time.

The starch hyacinth, called also grape hyacinth, or grape flower *(muscari racemosum)*, received its former name from Curtis, on account of its strong odour of starch, and the quantity of thick mucilage which exists in the plant. The old writers termed it tassel hyacinth, "because," says Parkinson, "the whole stalk, with the flowers upon it, doth somewhat resemble a long purse tassel, and thereupon divers gentlewomen have so named it." It is in some parts of France called wild onion, on account of its ovate, bulbous root. The flowers are composed of a thick, compact cluster of small purple or ash-coloured bells. The species called musk-grape hyacinth, is a handsomer flower than the starch kind. It has narrow leaves, more

than a foot long, and grows wild in southern Europe. The feathered hyacinth *(muscari comosum monstrosum)* is an exceedingly pretty border flower. It blows during April and May. Several kinds have an odour of musk; hence their Latin names from *muscus*. This substance is called misk by the Arabs. The flower is very general in the East, and one of the commonest in the Syrian field.

"In spite of nipping sheep and hungry cow,
The little daisy finds a place to blow."

Clare writes thus of our field flower, and the garden daisies keep pace with it. Indeed all the double, and quilled, and hen and chicken daisies, which have, for centuries, ornamented the edges of flower beds, are merely varieties of the common daisy *(bellis perennis.)* The Germans have raised a great number of varieties of this flower, differing especially in all the shades of red and white; but the dark-crimson daisy, so often clustering with the London pride around the cottage garden bed, is the most beautiful in hue. There is a garden species called the annual daisy *(bellis annua)*, which is much like our British daisy, and which grows wild as commonly as that, in the fields of Italy, Spain, and France. The large white Portugal daisy *(bellis sylvestris)* is the common ornament of the meadows in the land from which it derives its name.

Some of our most elegant spring border flowers are the saxifrages. They are chiefly Alpine plants, growing wild on rocky or stony places. One of the most common kinds is that which is in flower during this month, and sometimes as early as February. It is the thick-leaved saxifrage *(saxifraga crassifolia)*. It has pale-purple blossoms, and large, showy foliage. During autumn the leaves of this plant wither, and the stem turns quite black, and forms fibres, which constitute the root of the plant which is, in the following spring, to enliven the garden. This flower is a native of Siberia, growing among the snows of that inclement clime, and blooming far up the hills of those dreary regions. The variety called the thick, heart-leaved saxifrage bears larger blossoms. The London pride *(saxifraga umbrosa)* is the hardiest and most common of the genus. It grows wild on some of our mountains. The French term it *amourette.*

Nearly sixty species of saxifrage bloom in the English garden. Though mountain flowers, they will flourish on plain and valley; and many, like the London pride, will bloom amid the impure airs of the great metropolis. A few are difficult to rear. They can bear the cold spring winds, for their native haunts are the high peaks of the mountains, and the Alps and Pyrenees are made beautiful by their blossoms, which open even on the limits of perpetual snow; but our winter, with its frosts, injures them, for they have not at all times a thick covering of snow over their roots, and a wet season renders them still more sickly. On their ice-clad regions they bloom unhurt, and the snow gradually makes room for their blossoms to show themselves. Mrs. Sigourney has some lines addressed to mountain flowers well suited to them:—

"Man, who panting toils
O'er slippery steeps, or trembling treads the verge
Of yawning gulfs, o'er which the headlong plunge
Is to eternity, looks shuddering up,
And marks ye in your placid loveliness,
Fearless yet frail, and clasping his chill hands,
Blesses your pencilled beauty! 'Mid the pomp
Of mountain summits rushing on the sky,
And chaining the rapt soul in breathless awe,
He bows and binds you drooping to his breast,
Inhales your spirit from the frost-winged gale,
And freer dreams of heaven."

The pyramidal saxifrage *(saxifraga cotyledon)* is by no means an uncommon garden flower, but its large, handsome spikes of flowers do not open till June. They are white, spotted with rose-colour, and grow on the Pyrenees. The saffron-coloured saxifrage *(saxifraga mutata)* with its yellow flowers, requires shelter from the frost, and is among the least hardy of the tribe. It grows wild on the high lands of Switzerland and Italy.

One of the prettiest species is the round-leaved *(saxifraga rotundifolia)*, which blooms later in the summer, and is most abundant on the rocks and in the valleys of Piedmont; those valleys made deeply interesting, not only by natural scenery, but by the faith of many, who have in these seclusions died martyrs for the truths of the Gospel. A flower allied to the saxifrages, and called golden saxifrage, grows there too, and is eaten by the Piedmontese.

The purple flowers of the opposite-leaved saxifrage, and the white-flowered,

granulated kind, often bearing double flowers, are very common in the garden during April. The former was much admired by Dr. Clarke in Norway. The most beautiful and scarce plants were, he says, here pendent among the cliffs: this species of saxifrage especially, and a kind of gentian peeping above the snow. The clustered Alpine, the starry, the larger mountain, and the opposite-leaved species, also grew in great beauty; and "nothing," he adds, "can be more elegant, than the hanging clusters of the last, like pendent pearls upon the rocks."

The bright flowers of the double furze *(ulex Europæus)* are very fragrant now. It is merely a variety of our common moorland furze. It is not often that double flowers are found wild in this country, but this was discovered some years ago to be growing on some uncultivated moors of Devonshire, and has since been propagated by cuttings in the nursery-ground. The larger kind, called Irish whin, is a very luxuriant plant for the garden or shrubbery. It has no spines, and is often eight feet high. It must be propagated by cuttings, as it has never been known to ripen its seeds. The wild furze is common on our English heaths, and Stephens saw it growing in great profusion in central America, on the ruins of some of those interesting, ancient cities, on whose history books throw little light, yet whose origin and decay are deeply interesting to the philosopher.

In many gardens we now find in flower one or two species of arum, as the purple and Virginian arums. All kinds of this plant are sufficiently like our wild flower, called lords and ladies, to be recognised without difficulty as belonging to the same genus. They all have a central column, called by botanists a spadix, on which the flowers are found. The roots of all, like those of the wild arum, are pungent and acrid; but some of them are milder, and, as well as the leaves, are nutritive, when cooked. The celebrated yam of the isles of the Southern Ocean is the root of one of them. They are very abundant, and of various species in hot climates, and are used as common food by the natives of the West Indies. One species cultivated in our gardens, and growing wild in many parts of southern Europe, is the common dragon flower *(arum dracunculus)*, called by the French *la serpentaire*. It is a remarkable plant, and reminds one of a snake, by its leaves spotted with purple and brown. The flower has so strong an odour of carrion, that few persons can bear to approach it. Still more offensive is the odour from a species of arum which grows in ditches, about the Straits of Magellan. This plant has the appearance of an ulcer; and so powerful is its odour of decayed meat, that the flesh-fly deposits her eggs on its flowers.

Dr. Lindley, treating of the acridity which exists in the roots of the arum tribe, names one which has a singular and dangerous poison. This is the celebrated dumb cane of the West Indies and South America. This plant grows to the height of six feet. "It has," says this writer, "the property, when chewed, of swelling the tongue and destroying the power of speech." Dr. Hooker relates an account of a gardener, who incautiously bit a piece of the dumb cane, when his tongue swelled to such a degree that he could not move it. He became utterly incapable of speaking, and was confined to the house for some days, in the most excruciating torment.

More than a dozen species of arum have been introduced into the gardens of England; but they are, on account of their unpleasant odour, but little in general cultivated, and chiefly left to the gardens of those who value them as curiosities. One very lovely kind, however, is often found gracing the hall or parlour, and has a sweet fragrance. It is sometimes called the horn flower *(calla Ethiopica)*. It has a large, white flower, shaped like a leaf, and looking like an alabaster vase, while from the centre rises the bright golden column. Leaves of glossy surface and bright-green colour, sometimes two feet in length, add to its beauty, and it is so like the wild arum that it will not be doubted as being of the same tribe. It is very common at the Cape of Good Hope, having a most magnificent appearance on any moist portion of that arid soil, and growing even in ditches.

Several species of arum afford medicines, and the roots of some kinds, when boiled in milk, are thought to have been very useful in consumption. The dumb

cane yields a juice which gives a permanent dye to linen. Some of the newly gathered leaves are used in Demerara as blisters. One kind, very abundant in the woods of North America, is called the Indian turnip, as the Indians eat its boiled root. This is the *arum atropurpureum*, which has handsome leaves tinged with blue, and which is a vegetable of great service to the European settlers in these vast forests. The soft, silky leaves of some species are used in some hot countries as plates and dishes.

One or two species of spiræa are now beginning to put forth their blossoms on the shrubs. The smooth-leaved spiræa (*spiræa levigata*) is one of the earliest, and is a native of Siberia. Its flowers are of a pale rose colour. The pretty flower, commonly called Italian May (*spiræa hypericifolia*), is a very well known species, with its large bunches of small white flowers, among its dark-green leaves, and it is an undershrub in the tall American forest, blooming with us in the month from which it has its familiar name. About the same time, too, we see the bridewort or queen's embroidery, with its spikes of pinkish-lilac flowers, looking much like some piece of finely wrought needlework; and a little later the Virginian Guelder rose, and the Californian species, with its loose clusters of feather-like white flowers, floating up and down to every summer breeze, may be seen decking the summer bed, delighting most in a moist soil, and flourishing to fullest perfection in the garden through which a stream meanders.

Nor is this genus destitute of those herbaceous plants, those lowlier flowers, which sometimes find room on beds which could not admit of the more spreading shrub. The meadow-sweet (*spiræa ulmaria*) is often brought from our wild fields into the garden; the goat's-beard (*spiræa aruncus*), a Siberian species, is very ornamental with its white flowers in the month of June; and the dropwort of our meads (*spiræa filipendula*) is very pretty in the garden, when its blossoms have, by culture, been rendered double.

The bladder-nut (*staphylea pinnata*) is a hardy plant of North America, now in bloom. Its flowers are white, and the brown seeds are enclosed in a large inflated capsule or bladder. The hard, smooth nuts, bitter as they are, are eaten, in some countries, and in Catholic lands are strung as necklaces and rosaries.

During this and next month we may see the flowers of the numerous varieties of auricula (*auricula primula*). Most of them are kept in pots, but some common kinds are found in the garden, blooming beside the early hyacinth and other spring flowers. This flower has received great attention from florists, and innumerable varieties, differing both in blossoms and foliage from each other, have been the result of their pains. Several volumes have been written solely upon its culture, their authors recommending a great number of modes of treatment. The artisans of Lancashire have long been celebrated for the beauty of their auriculas; and Loudon observes, that it is no uncommon thing for a mechanic of that county, who earns from eighteen to thirty shillings per week, to give two guineas for a fresh variety, in order to raise seedlings from it. This flower was long known as the mountain or French cowslip. It deserves its former name, for it blooms above the snows of many alpine regions of Italy, Switzerland, and Germany. It is also found wild in the neighbourhood of Astracan. The old botanists termed it bear's-ear (*auricula ursi*), from the shape of its leaves, and gardeners have many fanciful names for the varieties they have raised. In its wild state the auricula is generally of a red or yellow, sometimes of a purple colour, and occasionally variegated, or scattered over with a mealy powder. In the garden the darker kinds have usually more or less of this white powder on their blossoms, and sometimes, too, on their foliage, as Thomson describes them—

> "Auriculas enriched
> With shining meal o'er all their velvet leaves."

The expressed juice of the leaves of the auricula was, in former days, a valued medicine; and Ray gravely says of it, that if mingled with the milk of a *red* cow, it will cure the most intense headache.

A pretty flower, called Greek valerian (*polemonium reptans*), is already in bloom. It has light-blue flowers, and is

a native of America. A much more frequent kind is the species generally called Jacob's-ladder *(polemonium cæruleum)*, which blooms in almost every garden in the month following this. It has numerous blossoms, either of a light blue, or varying in all the shades of blue and bluish-white, to a pure snow-white tint. This flower is in Staffordshire called charity; and the familiar name of Jacob's ladder was probably suggested by the form of its leaves, which consist of a number of leaflets, opposite to each other, on the stem, and not unlike steps. This was sufficient to lead our forefathers to adopt it as an emblem of something scriptural, at a period when monks and friars were the chief cultivators of plants, and the great discoverers of their virtues. The ancient writers held in great repute a plant which they termed *polemonium*. The name is taken from the Greek word signifying war, and Pliny relates, that it received this designation from its having been the cause of war between two kings, each of whom claimed the merit of having discovered some medicinal properties which it was supposed to possess. Great indeed must its virtues have been, if its good to mankind could have at all compensated for the ills brought on by war, and its attendant miseries; but if the plant we now call Greek valerian, is the same as that which occupied so much attention in ancient days, the discovery was indeed of little value, and its remedial effects of small power. It is not improbable, however, that the old name has descended, in this instance, to another flower than that to which it was originally given.

And now several of those ornamental plants of modern gardens, the flowering currant and gooseberry bushes, are hanging their abundant blossoms to the sunshine. These shrubs were unknown to us a century since, though now so many species are common. One of the most general of them all is now in blossom. This is the red-flowered black currant *(ribes sanguineum)*. Several varieties of this species are cultivated, distinguished chiefly by the colour of their blossoms. The dark-tinted variety is the prettiest. This plant was brought hither from California, where it grows wild, beneath the shade of the wood. It is found wild, too, most frequently, and in greatest luxuriance, in the neighbourhood of streams. Mrs. Loudon observes, that "the colour of the flowers varies much according to the soil on which the shrub is grown: the darkest and brightest hue has been observable in those plants which are grown on calcareous soils, and the palest and least brilliant are those grown on sandy soils." All the different species of flowering currant are hardy plants, and bloom early in the year.

Perhaps the most ornamental of all the common species of *ribes*, is the snowy-flowered gooseberry *(ribes niveum)*, with its hanging bells as white as the purest wax, and its dark-purple fruits of the later season, which are very agreeable to the palate. Then there are other species, with red bells and long stamens, like the fuchsia; and others with pale-green or gold-coloured blossoms; while one beautiful kind, the wax-leaved currant *(ribes cereum)*, has round leaves covered with a thin layer of a wax-like substance, and well deserves its distinctive name. The fruits of these flowering currant-bushes are all wholesome, and some of them agreeable to the taste. They are purple, scarlet, or black in colour. Several of them, however, will not ripen in this country, and others have a harsh and crude flavour.

(To be continued.)

SUBSCRIPTIONS
FOR THE BOTANIC HOSPITAL.

Miss Dearn	£1	0	0
J. H. Y.	1	0	0
J. L. S.	0	5	0

JUST PUBLISHED, PRICE TWOPENCE,

COFFIN'S REFUTATION OF LETHEBY's Falsehoods and Slanders on the System of Medical Botany.—Published by W. B. FORD, 134, High Holborn, London; and sold by all Dr. COFFIN's Agents throughout the United Kingdom.

NOTICES TO CORRESPONDENTS.

In answer to numerous inquiries, we have to inform our readers, that the "Autobiography of a Drunkard" will be resumed in our next number.

We have received an article from our excellent friend, S. Wilks, on Letheby's falsehoods and slanders. It shall appear in our next number.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

'Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

No. 208—Vol. VII. SATURDAY, MAY 3, 1856. Price 1d.

THE CONFESSION
OF
DR. LEATHERBREECHES;

Being his Sorrows for and Recantation of a wicked Article written as a Family Enemy, in 1856.

NAME.

I most humbly confess, that though my name is Leatherbreeches, yet I hope I am just as good a person as if my name were Letheby. So with Dr. Coffin; for there is an M. P. Coffin, and there is the famous "Long Tom Coffin," of Cooper's; and I must acknowledge Dr. Coffin may be as good a doctor with that name as with mine; besides, he might have chosen that name himself, because he saves people from their coffins, as well as from coughing and consumption.—"A rose by any other name would smell as sweet."

BIRTH, PARENTAGE, AND EDUCATION.

I confess, that though my father was a postilion in the good old coaching days, and wore leather breeches, and though I was named after him, yet that does not make me mere "leather and prunella."

But "little or nothing was known of my history or education beyond the fact of my having been, for some time, a wanderer in the wild prairies of medical speculation; where, in my intercourse with the medicine men, I have picked up a smattering of what is called 'doctorcraft,' and I have since become a professor of toxicology; examiner in general to all the stomachs that have taken too much cayenne pepper; whipper-in to the profession in general; fee-receiver from the coroners' inquests, and sworn-in special constable to put down all opposing sects in medicine, especially that sect called Medical Botany, *alias* Coffinism."

True, "the chief information you have had of me is unfortunately derived from the disclosures of myself at coroners' inquests," and from persecutions at the Old Bailey; when I remember I swore that that mixture called composition powder was composed of drugs so irritating as to inflame the back of my hand, and that it would have blistered my tongue if I had only held it in my mouth long enough."

But I am not like "Dr. Coffin, who has published a new system of medicine;" and, as I said, "recklessly administers the most powerful and dangerous drugs;" for I now must confess, that I not only deal, dabble in, and "administer the most dangerous drugs," such as arsenic, prussic acid, &c., but must confess also that I have "recklessly" sworn to that which was false, and am still in great danger of being proved a child of him whom the Scriptures call "a liar from the beginning."

I confess, alas! you may have learnt from the experience of your friends, "that my patients (when I have any) too often die in terrible speed and terrible agony." "But dead men tell no tales;" and it is a very good job for me and mine that they do not: for if they did, the spirits of the dead would be ever rapping around us, and I should not be able to rest night or day, for the dead would rise up in judgment against me, as well as against most of my brethren in physic: for, in fact, to use the words of a recent eminent doctor, as quoted by the *Times*, "The knowledge of medicine is so incomplete, and its action so uncertain," that when I began practice, I had twelve remedies for every disease; now I have but one remedy (namely, mercury) for twelve diseases.

MEDICAL THEORIES AND SYSTEMS.

I next must really confess to my ignorance of the system propounded by Dr. Coffin; but I stated what I then thought might "be gathered from the confused language of the ignorant followers of it" (as I called them); but what I said, I must confess, was "as rude and as barbarous as it was absurd."

But I now say with them, that man is like "a sort of steam-engine." "Heat is like life," "cold is like death;" and who does not know that it is "the fire that makes the water boil" and gets the steam up? "Food then is the fuel for the fire," and "drink the water for the human engine." Their "marvellous principles" are certainly simple; and I must confess that Liebeg, the great German chemist, talks something like it.

"Disease, however, is another condition of things;" it is either a want of steam, or "a failure in the heating process," to keep the engine of life going: therefore, their remedies are "hot and irritating substances, such as cayenne, cloves," &c. I beg pardon—that's what I did call them;

but now I know better—I call them warm and stimulating articles, such as City aldermen delight in, and especially delightful in mulligatawny or turtle soup.

I remember a judge, at the Old Bailey, saying, very quaintly, "They consider these things very good in the City; do they not?" and this after I had sworn that the common composition powder was principally made up of cayenne pepper; in which oath, I must confess, I was wrong—and I am bound also to add, that I stood more chance of frightening a coroner's jury, especially when I held the coroner by the button, than a sworn jury in a court of law. Certainly, I always failed in establishing any charge I made, and those were not few or far between, at one time, when we wanted to press through the House of Commons a thorough-going Doctors' Bill, with good old-fashioned "pains and penalties" for recusants; but now, I confess, that though I and the doctors profess to cure, "yet it has been as gravely replied, that as long as there are 'doctors' in the world there will, assuredly, be plenty of coffins, undertakers, and gravediggers."

I did say, "The two medicines chiefly employed by COFFINITES were cayenne pepper and lobelia inflata;" but the first. I must say, is used universally as a condiment, by epicures, rich livers, club-house soupmakers—and many a hot dose has the errand-boy, tradesman, and even crossing-sweeper, had there. And further, I must confess I told a direct untruth, when I said, "That a teaspoonful of the pepper was the quantity usually administered by them," and which I said had such an effect as to make the bowels look like "currant jelly," although, in fact, I have known that quantity exhibited on an emergency, or on a sudden cholera attack, without its having turned the bowels into "currant jelly;" but I've seen the patient cured by it; and I must candidly confess that warm aromatics, taken reasonably, are good things to enliven the fire of life, when it burns dim, and to keep up the steam of the bodily machine.

But did I say that cayenne was a dangerous drug? I think it must have been a mistake—a "*lapsus linguæ*." But, I remember, I did say, "Lobelia was a still more dangerous drug." Thus, I must have been either bad in my creed, or bad in my logic: for, I verily believe, that if the stimulants, which I called "irritants" (just by the way of giving them a bad name), were useful to help the old woman of the "animal economy" over the stile of sickness and difficulty, then this lobelia may also be useful in cleaning out the fireplace, the air-pipes, and the alimentary canal of the animal "steam-engine," and would, of course, give freer vent and passage to the vital air and vital fluids: for the motto of lobelia inflata is, I find, "a clean breast," and sometimes, "a clear stomach, and no favour."

I know Dr. Elliotson, the great mesmeric heretic, says, that lobelia, in cases of asthma, "acts like a charm" in clearing away the glutinous secretions, which clog up the trachea and air-passages, yet, I hope, I am not altogether to blame in condemning lobelia: for most of you must be aware that it ought not to be poured down the throat, "when the powers of the system are prostrated by disease, or by old age, and when the stomach has not the power to evacuate its contents." No; I am sure no COFFINITE that knows the A B C of Medical Botany would be so foolish, or so wicked, as to do such a thing as that, any more than he would give "strong meat," to the infant, or roast pork to the invalid. Everything in its place, I say—the nurse gentle, the doctor attentive, and the medicals appropriate.

THE PRECEDENT OF AMERICA.

I first learnt from Dr. Thacker (? Thatcher), and Wood of America, that lobelia inflata was a shocking poisonous herb, and that one Samuel Thompson, "a noted empiric," "was tried for poisoning a person by it;" but on reading the case, as reported in the interesting autobiography of Thompson himself (and not in the 10th vol. of the "Massachusetts Trials"), I come to a very different conclusion, and one more like the truth, for it seems a certain Dr. French became very spiteful and malicious against Thompson, because he cured many cases Dr. French had given up to die, or as incurable, and so he became very wroth against "the noted empiric," and swore very ungentlemanly vengeance against him for interfering with his practice, in not letting his patients alone to die in a respectable and legal manner: so much so was this the case, that Dr. Thompson was obliged to go armed. But what this French could not accomplish by force, he did through treachery. A young man, named Lovett, whom Thompson had attended some fortnight before his death, died, and this champion of protection, Dr. French, with one named Howe, went before a judge and, by *ex parte* statement, got a warrant for Dr. Thompson's apprehension, on the awful charge of "wilful murder."

This being an unbailable offence, Thompson was thrust into prison. The ends of malice were answered; and it being only just after the half-yearly assize, then he must lie till the ensuing assize—then he must lie under that dreadful charge for that time, and report and prejudice would thus have time to murder his reputation, and destroy, if not his body (which it was very near doing), yet would destroy his influence and standing in society, and discourage and dissipate his friends. But whilst thus treated as a criminal before trial, he had an energetic friend in high quarters, who petitioned on his behalf, and got a special session to be held in order to settle his case.

The court was at length assembled. Near fifty witnesses were there on Dr. Thompson's side, who had largely benefited by his remedies. The jury was sworn, and the case began. The prosecuting solicitor, propped up by the learned men of physic, made a dash at quackery in general, and poor Dr. Thompson in particular; and on they went, dashingly, till Dr. Howe was called, when he triumphantly produced the root of the horrid, poisonous herb which had caused such mischief. Whilst he was dilating on its effect, one gentleman asked to see this dreaded root closer. He looked at it; he tasted it! the court sat astonished at his temerity, till he exclaimed, "Taste it, yes; why it's nothing but marsh rosemary!"—"No more

was it," says Thompson, in his quiet way. The prosecution shuffled its legs, then fell to the ground, and Thompson was acquitted without, as the judge said, "anything against him," at the same time blaming the grand jury for bringing in a true bill. But the law report was made up under the influence of the doctor's false statements, and fear of the spread of what they call quackery.

But a false charge has often a great effect, and gets quoted and requoted till it is sometimes believed. Dr. Thompson could not call his witnesses, as the case was broken down; but he did afterwards bring a charge against this said French "for wilful and malicious libel and perjury," who was also acquitted by the help of brother doctors and hard swearing. But this wicked Dr. French fled the country in less than a twelvemonth afterwards, having himself offended against the law. Thus, having deceived others, he ended by deceiving himself.

I must confess the particulars of this case somewhat turned my previous convictions, and I most humbly beg to take it as a solemn warning to myself:

1st. To be careful in receiving reports, and to look at both sides of the question.

2nd. Not to throw stones at others, seeing I have myself been living in a house of glass.

CASES FOR AND AGAINST.

I confess also to having brought together all the worst cases I could muster of deaths, investigations, coroners' inquests, &c., of persons dying under the treatment of the Botanists, COFFINITES, or herb men, since they have made such a noise in England, and I have recited eleven cases.

But I am sure that all the cases I have disinterred I should be very glad to bury again, for they seem to tell more against my side than for it; and though, by blowing the doctors' brazen trumpet, and trying to frighten the people into acquiescence for more stringent "legislative interference and restriction in these matters," I thought to protect the game-preserves of the legal practitioner from the poachers called quacks, or illegitimate killers of game; I might, I say, have furthered the ends of my class for a time, and might have deserved well at their hands.

But now, verily, I must come to the conclusion. I did not do what was right for the ends of "truth and justice, not having the fear of them before my eyes," for in again examining the eleven cases I recited, I find there were five of them cases of inquiry, with varying portions of exoneration or blame, and six were cases returned as manslaughter by the not very unprejudiced coroners' inquests, where the "old medicine men" hold the strings, and dust the eyes of the juries.

But I find that not one case was substantiated in a legal court, nor were any witnesses ever needed to be called for the defence; the doctor's evidences having in each case broken down. Thus the only effect has been to rouse the spirit of the persecuted class of medical heretics, and put them to some expense. 'Tis true it might have frightened some of the poor timid mortals in society who belong to that class, who do not like to have the trouble of thinking for themselves, but must hang on to the orthodox and legal creeds and fashions of the day.

I confess further, that in some of these cases no lobelia had been taken, only composition and cayenne, thus making it appear that the cases were got up, not because of the danger of any of them, but because the prescribers were poachers; and as I was one of the gamekeepers, I thought they ought "to be dealt with as the law directs." In fact, our object was to get power, by a more stringent Act of Parliament, to put up the notice —"All trespassers will be prosecuted."

I must also confess, and I do it with some contrition of heart for my dishonesty, that I only reported one side of the question; but I can give an excuse at least for that, viz., I always carried a coloured eyeglass, and in that I must say I followed the doctors of America, who are fond of glasses, especially eyeglasses, for in the report of these eleven cases I did not distinguish the diseases; but now I find that four of them were cases of inflammation of the stomach or bowels; three consumption or inflammation of the lungs; two epileptic fits: one a case of cholera; one of long and aggravated asthma.

I presume that in no case would they go to the doctor unless they were ill, "for they that are whole need not a physician." And I acknowledge, with deep lamentation, that the old-school doctors do not cure all the cases of inflammation, consumption, cholera, &c., that come before them. O no! In fact, if there were coroners' inquests held over the cases of death under us, we should have about 160 per day in London alone, and that would be very shocking, not to say dreadful; it would imply that we killed every one that died under our treatment, which is really too much to say of any class.

But in acknowledging my faults this day, and in setting my sins before me, I must say, as some little justification of myself, that at least you did not cure these eleven cases, for you see you acknowledge you did not, and a good many more no doubt, for you can't cure old age, everyone must die some time, and, according to my former statement, must be killed some time.

I was mistaken; I thought you COFFINITES professed to cure everybody, and if you professed it, why of course you ought to do it. Now the doctors do not profess that; they know a per-centage alone can be cured; for instance, inflammation must terminate either in resolution or suppuration, and then, perhaps, in mortification.

But do you see every case that dies with us? Friends weep, but are consoled by saying "it's the will of Providence," and so Providence gets all the credit for it; but if they are cured, if we allow them to recover, then we get the credit all to ourselves. Truly some doctors are so good as to try to get people well, though they have not much money to pay them, and perhaps they get well the quicker for it; but I say, "Wo be to the family that gets a family doctor, for verily he will find work for himself."

THE LAW OF THE CASE.

Truly, judges differ in matters of medical jurisprudence, and it is very likely for a lawyer or a doctor who gives you his opinion or prescription.

You may go over the other side the way and get it contradicted for seven shillings and sixpence in the one case, and perhaps for nothing in the other. But one judge I know lays it down emphatically, "that any one, be he legal practitioner or otherwise, showing gross ignorance or gross carelessness in administering to the sick, is equally amenable to the law and its penalties."

CONCLUSION.

Now I think I have nearly done with my confessions, and I hope you will see for yourselves the amount of truth in them, and not be led away by my "former statements," which I now acknowledge to have been so incorrect, that I am positively ashamed of my former self, and of my former name, therefore choose rather to abide by the name of Leatherbreeches; and though I did say that every one engaging in the practice of Medical Botany, *alias* COFFINISM, "are not only offending against the moral laws of society, and doing that which, in their own consciences, they may heartily regret, but they are also laying themselves open to the criminal laws of the country"—but whereas I only said it to frighten the people, and help my own craft, I hope you will excuse it; for of old it was said, "nothing like leather;" so I said, "Nothing like having a respectable doctor, employed in a respectable manner, and receiving a re pectable, legal fee;" and so we cried, "Hurrah for free trade in every other trade but our own trade; and, in that, protection for ever!"

THE MORAL.

Lastly, to make "a clean heart of it" (as I said Lobelia did), I and my brothers in legal pharmacy and quackery thought that, by raising a great cry out of doors, we may press on the Legislature to pass a good restrictive Medical Bill, which should keep all the sick to ourselves, and not let other people dip into their pockets, as I am sure we dip quite deep enough—a Bill that would fine and imprison any man, who dared to prescribe aught for himself or neighbour, under the penalties of fine or imprisonment, which would have been a grand thing for the legal doctorcraft; and so I said, as a conclusion and moral to my "former statement"—"The reader will perceive a growing necessity for legislative interference in these matters: for what can be worse than that the poor man's life and health should be the subjects of such a dangerous trade?"

But as I can see no chances of carrying a restrictive medical bill, seeing all the universities, colleges, halls, and schools are opposed to each other—seeing that we are not likely to attain either uniformity in faith or practice, nor any bill that will protect the profession alone—I must say, I feel sorry for my past misdeeds; and as I now say, and have all along said, that the profession cannot stand alone, or trust to their own legs and merits, but must have legal crutches to support them, I come now to think that I ought to beat on a different tack; and so I say—Well, every man must judge for himself, and if they are too ignorant, we ought to instruct them; but certainly, every man ought to have the right to be his own doctor, if he thinks it best; and, at all events, they ought to have the right, without let or hindrance, to choose their own doctor, or system of treatment, the same as we are all allowed now-a-day to choose our own religious teacher; and though all may not choose the parish parson, but a dissenter or a heretic, why, the consequences is with me—if I do wrong, the punishment is for me. So it is with all of us, morally and physically, according as it is written in the laws of the book of Nature and truth. But as to my having maligned the character of honest men, "I am sorry, sorry, sorry; but, as some compensation, I henceforth wash my hands of all tyrannical medical force bills. And now, begging the COFFINITES' pardon for so long trespassing on their patience, I will wish all people health and happiness, and that they may be good and wise enough to pension all the doctors off, and let them lie quiet on their shelves.

(Signed) Dr. LEATHERBREECHES,
Professor of Toxicology.

Witness, A COFFINITE.
April 10th, 1856.

THE NERVOUS SYSTEM.

IN the two former numbers of this Journal we have given a brief view of the details of the nervous system. We do not hesitate advising our readers to make themselves well acquainted with this important subject. It is one upon which knowledge may be most valuable and ignorance of which may be productive of mischievous, yea fatal consequences. Nerves are neither iron nor brass, but most delicate fibres easily affected by comparatively slight causes. They permeate the whole human frame, and are, therefore, accessible by all kinds of influences—the atmosphere we inhale, the temperature of the air, the food we take, and the ablutions of the body. The whole system is so intimately connected that there is the most perfect and powerful sympathy in constant action. The finger or the toe cannot suffer without the whole system being affected to a greater or less degree in exact ratio to the amount of local pain experienced. These are considerations which should make every human creature think and endeavour to prevent the beginning of any disorder of the nerves, or to lose no time in removing disease if it has really set in.

We think it here right to inform our readers that at least 90 per cent. of the cases of paralysis and apoplexy which occur arise from the reckless treatment of the nervous system. The two great enemies to the nervous system are in-

temperance and injudicious medical treatment. Under intemperance we include the free use of alcoholic drinks and incontinence; and under injudicious medical treatment we include the use of calomel and other mineral medicines. It is not generally known that the loadstone has not a greater affinity for steel than the human nerves have for alcohol. Not more quickly does the needle fly to the magnet than alcohol flies to the brain. The brain is the great organ and seat of the whole nervous system, and in the same ratio that its tone is healthy will be the vigour and energy of the whole human frame.

We advise our readers to attend to a few simple suggestions, to keep a vigorous and healthy state of the nerves. Pure atmosphere, cleanliness of habit, frequent ablutions of the whole body followed by friction, will greatly assist the skin in throwing off those secretions, which when obstructed interfere with the energetic action of the nerves. An entire abstinence from spirituous liquors, calomel, opium, and other deleterious drugs, bodily exercise, a judicious government of the passions, which will prevent an expenditure of physical strength, and a moderate mental occupation—these are the suggestions we give to those whose nerves are now in good health, as the means of keeping them so.

But in reference to those whose nerves have already been injured, we press the above suggestions with great earnestness, and also advise the frequent use of Dr. Coffin's "stomach bitters," and should not this medicine produce the desired benefit, add to it a small quantity of the powder of valerian and sculcap, or any of the "nervines," or "tonics" recommended in the "Guide to Health."

Some of the most fearful cases of insanity we have ever witnessed, might have been prevented had the suggestions we have given been adopted in time. Excess has been indulged, habits truly debilitating have been acquired, mischief has commenced, power to resist temptation has gradually lessened, and every day the patient has become worse, till at length the symptoms of mental aberration are too frightful to allow the maniac to have his liberty. He is immured in some lonely place of confinement, but his habits go with him, and if these craving harpies cannot be gratified in one way, they will in another. The frame wastes, and the patient dies. He has destroyed himself. He has not plunged a poniard to his heart, nor strangled himself, but he is to all intents and purposes a suicide. He has died by his own hands. Not a few instances of this kind have come under our immediate notice. We refer to them as a friendly warning against that wanton trifling with the nervous system which is too prevalent among the young of the present day. A timely attention to the nervous system is quite necessary, and wherever this is adopted, a guarantee is given, that in the ordinary course of events the individual adopting it may enjoy a healthy, vigorous old age, which we desire to secure for all our readers.

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 359, vol. VI.)

The day came that the men were to be paid their marching money, and that day Colin was appointed to mount a sergeant's guard, by the interest of the sergeant-major, who knew well that he would be sure to get himself into trouble, as most of the men would get drunk that night with their marching money.

When night came on there was a prisoner brought to the guard-house for getting drunk. The colonel of the regiment was the Earl of Home, who came to the guard-house, and told Colin that he had ordered Wilson to be marched to the guard-house as a prisoner, and that if he (Colin) let him have any more drink he would punish him, after the regiment was dismissed, by confining him in a dark hole, there to be fed on bread and water for one month. Colin told him that he should be very careful not to let him have any. The colonel was hardly out of sight, when Wilson called Colin into the guard-house, and told him that he wanted to go out of necessity for a few minutes, and that he must go with him. Colin thought it his duty so to do. Wilson led him down a dark passage, having hold of each other's hands. Wilson opened a door, and they stepped into a

whisky-shop; he called for a glass, and gave it to Colin to drink, while he went to the closet. Wilson was some time gone, and whether he went there or not, Colin could not tell; he had two or three more glasses of whisky, and when Wilson made his appearance, he was more drunken than when he first came to the guard-house. Thus Colin and he were both so drunk that neither of them could walk. Some of the private men took them to the guard-house. Whilst Colin was absent, the picket had brought upwards of twenty of the men whom they had found drunk and disorderly in the street. They were all fighting one with another when Colin came, but he could do nothing with them, he was so drunk. The guard-house was opposite the house where the major of the regiment was quartered; the noise of the men quarrelling and fighting had disturbed him; he came and opened his window, and called for the sergeant of the guard. Colin was so drunk that he could hardly speak. When the major asked him what all the noise was about, Colin gave him a saucy answer, and in reply, the major told him that he should report his conduct to the colonel in the morning. Colin told him to shut his mouth and go to bed.

In the morning, after the regiment had been at drill, a sergeant and a file of men came to the guard-house, and ordered Colin to strip himself of his sword and belt, and consider himself a prisoner. The serjeant-major told him that a court-martial would be held upon him in the afternoon, and that he must think himself well off, if he got the stripes taken off his arm, and three hundred lashes on his back. Colin was in a dreadful state —what with the effects of the liquor that he had drunk the night before, and the punishment he thought of receiving. The widow woman with whom he lodged was much distressed when she heard of his situation; she sent for Mr. Thompson, and he went to Colin's captain and interceded for him; he even went to the Earl, and represented his case in a favourable light; and he made an apology to the major, and pleaded Colin's ignorance of his duties. The widow brought him his dinner, and with it a new loaf of bread, which had absorbed nearly half a pint of brandy, neatly wrapped round with dough, as if it were a pudding, which she told him afterwards was designed to keep his spirits up.

About four o'clock Colin was brought from the guard-house, by a file of men, to the orderly room. After standing there for half an hour, the adjutant read over all his misdeeds that he had been guilty of the night before, the major signed his name to it. All he was asked was if he had got drunk while on duty. He said yes. He was then asked if he made use of those expressions to the major. He said no. The sergeant-major hinted to the adjutant that there were two or three of the privates in the guard-house as prisoners at the time, and who would swear that Colin did say those words to the major. The major did not press the charge; and the colonel said as the regiment would be dismissed in the course of a fortnight, he would punish the prisoner then. The colonel told him to go and join his company, and when the regiment was dismissed, he should talk to him on another subject. Colin got his sword and belt again, much to the mortification of the sergeant-major and his party. Colin paid more attention to his duty afterwards, but was never allowed to mount guard again. The month for training was expired, and the regiment dismissed. They gave in their clothes and fire-arms, and each man had to sign the regimental book that he had received all his pay and marching money. Colin had got quit of the red coat, but was afraid to go to the orderly room to sign, for fear the colonel should be as good as his word. He was happily disappointed; for the colonel that morning had received a letter that his relative, the Duke of Buccleuch, had been taken seriously ill. He went off by express, without saying what was to be done in Colin's case, and there the proceedings ended, and also his being a soldier. Colin's next start was for Newcastle, where he thought of obtaining work from his former master, which he did. He was, however, greatly annoyed by the widow of the public-house where he was billeted, at Coldstream, when a soldier, who teased him with her letters; and as the coachman and guard of the Newcastle and Edin-

burgh mail lodged at her house, she used to send Colin all sorts of fruit and vegetables. Sometimes a pound note, or at least ten shillings, accompanied the parcel, and she never forgot to send him a bottle of whisky. Colin saw that if these things were carried on much longer, he should get himself into trouble, although he told her at the first that he was a married man. Colin was so pestered with letters from her, that he acquainted Mr. Arundell, his employer, and sought his advice, which was to leave Newcastle, and go farther up the country, which he did. Colin, after revelling two days and nights with his shopmates, without a farthing in his pocket, knew, when he got to Durham, which is 15 miles from Newcastle, that if he did not get work there, he should receive five shillings from the trade fund. He was at Durham that evening, but could not get a job. The master he applied to told him that he had received a letter from a Mr. Hinde, a leather-dresser, at Richmond, in Yorkshire, the week before, who wished him to send him a man, and he should have a good job of work—he gave Colin a letter to Mr. Hinde. But the love of drink is the root of all bitterness, as it is the root of all evil. Colin stopped in Durham until he had spent all his relief money but sixpence, which was to carry him to Richmond, a distance of 36 miles, in the middle of November. He got to Richmond between seven and eight o'clock at night, penniless. He made inquiries for Mr. Hinde, and found, to his great disappointment, that Mr. Hinde had sold off everything, and was off to America, cheating his creditors, and that what he had wrote to the master in Durham was only a blind, as he owed him a large sum of money. All his men were gone, and Colin was in "queer-street," as he called it—he had no money, and what to do he was at a loss to know. He went into a public-house—the sign of the Bell—and offered to the landlord a black silk neckerchief, which he got as a present from the widow at Coldstream, if the landlord would give him a bed for the night and a pint of beer. The landlord would have done so, if he had not been stopped by a constable who was drinking in the house. Colin told the constable it was nothing to him if he did give his neckerchief in exchange for a pint of beer and a night's lodging; but the constable even dared the landlord to take the article. Colin got warm in the debate, and spoke his mind to the constable, and no doubt was impudent. The constable told him that he should put him out of town that very night, and that if he could not do so himself, he should have two or three more to help him; but he had no occasion for any assistance, for Colin was very tired: he was taken through the turnpike by the constable, and there left. His spirits kept up, although his body was crushed by fatigue—he asked the man at the gate if he had any outhouse in which he could take shelter for the night. He told him he had not, or he would have sheltered him. He then asked the man if there was any justice of the peace near. The man told him there was a Mr. Nisbet, who lived about a mile up the road. Colin felt the necessity of applying to a magistrate, as his case was desperate. The night was very wet and dark. The man at the turnpike gave him directions how to find Mr. Nisbet's house. Colin found the house, but committed a great error, for he went to the front door and rang the bell, instead of going to the kitchen door. This displeased a poor pampered menial of a boy in livery, about 16 years old, who, when he opened the door and saw him in such a state, actually spat in his face for not going to the kitchen door, and was shutting the door against him, when Colin made a rush into the hall, and desired another servant, who had come to the door on hearing the scuffle, to call his master. He told Colin that he could not see his master that night, as he had company. Colin said it was a case of life and death, and if the person died before morning, his blood would lie at his door. The servant then went and informed his master, and told him what the man had said. Colin's clothes were dripping wet, and for that reason he was not shown into a room. Mr. Nesbit left his company, and came to the hall to hear the case—it was then nearly nine o'clock. Mr. N. asked him what he wanted? He told him how disappointed he was in not meeting with Mr. Hinde, and gave his certificate of character, which he got from Mr. Arundell, and the letter from the master

in Durham, and related to him how he had been treated by the constable—that he had no money, was in great need of something to refresh him, and a bed to lie down on. Mr. Nisbet told him to wait a few minutes, and he should have all that was necessary: he then went and wrote a note, and gave it to him, with half-a-crown, told him to give the note to Mr. Cook, the landlord of the Bell, where he had been, and he would furnish anything he had need of, and not to speak to Harper, the constable; that there would be a bench of justices on the morrow in the town-hall, Richmond, that Colin and Mr. Cook must appear there, and as the constable would be sure to be there, Mr. Nisbet would keep his papers till to-morrow. Colin came into town again with a better heart—it was striking ten o'clock as he got to the Bell, where he again met the constable, who threatened to put him in confinement till the morning. Colin did not speak to him, but pushed on into the Bell, and called for a pint of beer, and tendered the half-crown to pay for it—he gave the note to Mr. Cook, the landlord. After he had read the note, he ordered a good fire in the bar, and went up stairs, and brought down a bundle of dry clothes, told Colin to go into the bar and strip and put them on. He made ready a hot supper for him, with some warm beer and rum, and ordered a bed to be warmed for him, and his clothes that were wet, to be thoroughly dried by the fire. The constable did not know which way to look; he asked the landlord if Colin had any friends in town. Cook told him that the greatest man in the place was his friend, and that he should see in the morning. The constable now would have given Colin anything to drink that he liked to call for, but he would not have anything to say to him. Colin got into a warm bed, and Mr. Cook brought him a warm posset to drink, and he got into a perspiration. In the morning, when he got up, he did not feel any bad effects from the rain, cold, hunger, or fatigue, that he had encountered the day before. He got a good breakfast, and what liquor he had a mind to call for. The landlord and he went to the town-hall, and had to wait three hours before they were called. At last Colin was called, and also the landlord: Colin was told to state what he had related to Mr. Nisbet. He did, and called on the landlord of the Bell as his witness, to confirm all that he had said about the silk neckerchief, and Harper's driving him out of the town. The chairman told Harper that it was not the first or second time that he had annoyed persons who were like circumstanced—that the man had as great a right to sell any of his clothes for support, &c., as any gentleman on the bench had to sell part of his estate.

They told Harper that they would dispense with his services as constable, and they swore another in his place. The justices then examined Colin as to his destination, as he was disappointed of work in Richmond. He told them that he intended going into Lancashire, as he had worked there before. He was then ordered out of the room, and in half an hour he was called in again, when the chairman handed him about thirty shillings, which they had subscribed for him amongst themselves, with a caution not to spend it all in drink. He thanked them, and went home with the landlord, Cook, to the Bell Tavern, and got very merry, and stopped there all that night, and set off the next morning for Lancashire.

(To be continued.)

WILD FLOWERS OF THE YEAR.

(Continued from page 375, vol. VI.)

MAY.

"Grateful 'tis,
Ah, passing sweet, to mark the cautious pace
Of slow-returning Spring, e'en from the time
When first the matted apricot unfolds
Its tender bloom, till the full orchard glows;
From when the gooseberry first shows a leaf,
Till the high wood is clad, and the broad oak
Yields to the fly-stung ox a shade at noon,
Sun-proof."—HURDIS.

FROM about the middle of March until summer is fairly ushered in, vegetation makes such rapid progress that we every day observe some changes. This is particularly the case if we walk among the woods, for never are the woods so bright nor so full of those flowers which love the shade, as during April and May. The spring colouring of the trees, too, has its own emerald beauty, though differing from that of the richly variegated autumn.

There is also something peculiar in the life and activity of the spring woodlands, which contrasts with the stillness of the autumnal season in the same spots — when no birds are singing, and when the winds are still, the influence of their shade and silence is like that of the starry sky, soothing and calming to the mind; but the spring wood is all so joyous and so full of voices, that they who wander thither, leaving their hearts open to the impressions of nature, feel that its songs and soft green light and delicate shadows inspire to gladness. A wild thrill of delight is among the trees. The storms of March have left behind, the lilac clouds and the bright gleams of sunshine, and, as yet, the quivering leaves hide not the light, and a thousand mingled voices hail the coming of summer. Happy are they to whom God has given hearts attuned to the utterances of nature, and whom the cares and follies of the world have not weaned away from its teachings! Happy too, if in the seclusion of the woodland, their hearts can be lifted up to God, with wonder and admiration of his providential goodness to those of his inferior creatures which sport and sing in the woods; and more blessed still, if they can recognise that God, not only as their Creator and the Father of their spirits, but commune with him as their Friend and their Guide, and, like Adam in the brighter bowers of Eden, hear the voice of God among the trees.

The turf which enamels the ground of the wood is rich with a variety of flowers,

> "As if the rainbows of the fresh, wild spring
> Had blossom'd where they fell."

The hyacinth, the anemone, the violet, and the wood-sorrel, are as beautiful as during last month, and many of the large tribe of orchis flowers are coming into bloom. A very singular one is the brown bird's-nest orchis, or tway-blade *(listera nidus avis)*. One might see it growing, and on passing it hastily, take it for a withered flower; but on gathering it, we see that, brown as it is, it yet has life and freshness. It is just of the colour of some drooping oak-leaf, which is fading on the autumn bough, or strewed among multitudes on the winter earth. It is not, however, on account of its colour, that it received its familiar name. Unlike the generality of our British orchises, its root is not formed of bulbs, but of a number of fibres, crossing and entangling each other, like the sticks of a crow's nest. Its common companion in the wood, is another species, the green tway-blade (*listera ovata*), with its broadly ovate leaves and spike of small yellowish-green flowers. They are both of the orchis tribe, and persons accustomed to this family of plants would easily recognise them as belonging to it.

More conspicuous than these, and more beautiful also, is that species of orchis commonly called the lady orchis, which is the brown-winged orchis of the botanist *(orchis fusca)*. It is during May very common in chalky woods, especially in Kent, and is the handsomest of our wild orchideous plants. The stem is sometwo or three feet high, and the large and thickly set flowers form a cluster of the size of a bunch of grapes. The upper part of the blossom—the helmet, as it is called—is of a dark-brown purple colour, but the lower lip is white and beautifully spotted. Gay enough it is to represent a lady delicately attired—for "even Solomon, in all his glory, was not arrayed like one of these"—but in what other respects it resembles a lady, it would be hard to tell. A similar remark might be made of the man orchis *(aceras anthropophera)*, which is as much like a man as an animal, and far more like some of the smaller insect tribe, as a gnat. One month later, and we find on the chalky down two or three species of the orchis plant, which certainly much resemble the insects from which they are named. These are the bee, the fly, and the spider orchises. The latter, however, is so similar to the bee orchis, that many writers consider it merely a variety of the same plant.

The bee-orchis *(ophrys apifera)* is abundant on some chalky and clayey soils, yet is so confined to peculiar spots, that it can hardly be called a common wild flower. In Scotland it is almost unknown; in many parts of Kent, and the Isle of Wight, it flourishes in profusion. The blossom is nearly as large as an humble-bee, and so like that insect in form and colour, that it might mislead the passer-by into the belief that a bee

was hovering on its stem. It never deceives the bee himself, for, on a warm day of June or July, a number of these busy creatures settle upon it, and rob its nectary of the sweet juice, which it contains in abundance. The fly-orchis, too *(ophrys muscifera)*, grows on similar spots, and as nearly resembles the fly as this does the bee.

The resemblance of insects is far more striking in the orchideous plants of tropical countries. One species, the butterfly orchis *(oncidium papilio)*, is so similar to our tortoise-shell butterfly, as continually to deceive the eye of the traveller. There is something so remarkable in these resemblances that the lovers of flowers usually feel much interested in the orchis tribe, and many exotic orchises have been of late years introduced into this country.

Our native orchises, which, though not in bloom till next month, are now sending up from the earth their long, glossy leaves. There are more than thirty species of our wild flowers, not all called orchis, but all of the orchideous tribe, and all much alike. The two most common species, which are found in almost every English county, are the early purple orchis *(orchis mascula)*, and the green-winged meadow orchis *(orchis morio)*. The former has its leaves marked with dark-purple spots, and is very frequent in the woods in May. The latter is found in meadows at the same season. They are both of a pinkish-purple colour, and the wood species is sometimes deliciously fragrant. The meadow orchis often grows pretty thickly among the grass, and has been found with fawn-coloured blossoms. The roots of both these flowers are perfectly wholesome and nutritious. The marsh orchis *(orchis latifolia)*, and the spotted palmate orchis *(orchis maculata)*, are also common, but on moist places only. They have pale-tinted lilac or white flowers, and are thus quite distinct from the two kinds just mentioned. They are also taller, and more slender, but by no means so general. In Essex and Cambridgeshire they are abundant. On the bogs about Tunbridge Wells, they are among the most common flowers; yet in many districts in Kent, famous as it is for orchis plants, and possessing peculiarities of soil necessary for their production, not a single plant of these two species can be found.

The butterfly-orchis *(habenaria bifolia)* is another flower which, by its beauty and frequency, claims our notice. It has white, fragrant blossoms, the scent of which is considerably increased in the evening. It blooms in June in the moist copse, and though much like a butterfly, yet resembles some smaller and more slender-winged insect. No hothouse flower is more delicately beautiful than this simple tenant of the woods, which so often lives and dies unseen by the eye of man.

A very pretty but very small species of orchis, called ladies' tresses *(neottia spiralis)*, is common on dry, hilly pastures, but so uncertain in its appearance, that we cannot depend on finding a single plant in the next summer on a field decked this year with thousands. A field in the neighbourhood of Tunbridge Wells was, in the summer of 1843, so full of it, that one might gather it at almost every step. In the August following, not a stem or leaf indicated that it had ever grown there. This flower had several old names. It was called sweet-cods, sweet-cullins, and stander-grass.

In considering the orchises, we have rather anticipated the season of the year, as several of them grow in the later months. We may, however, with tolerable certainty expect to find in the May-woods a pretty and well-known blossom, the wild strawberry-flower *(fragaria vesca)*, which blows both now and in June. The patches of this meek white flower lie among its leaves on the grassy bank which skirts the wood, and are still more numerous beneath the shelter of the overarching boughs. This flower is of the rosaceous family of plants, its shape being like that of the wild brier-rose, and all fruits growing on a plant bearing this shaped flower may be safely eaten. A more wholesome or a sweeter fruit than this, cannot be gathered. The wood-strawberry is common throughout Great Britain. It is equally so in the woods of France; and the Parisians esteem this small fruit, and that of the equally small alpine strawberry, as far superior to the hautboy.

The different kinds of strawberry are

natives of temperate, or cold climates, and are common in Europe, and the greater part of America. They also often present themselves to the eye of the traveller on the hill-sides of Asia and Africa. In cold countries, berries generally are more abundant than in warmer regions, and the wild strawberries grow in great quantities in the woods of Sweden, and is much valued for desserts. Linnæus considered it the most wholesome of all fruits, and records that he, in two instances, was cured of fits of the gout by eating wild strawberries. It is commonly carried about the towns of Sweden for sale, and the great botanist desired his servants to purchase, at all times, the strawberries which were offered at his door, however large the quantity. Hoffman thought that, if eaten in the early stage of consumption, they would arrest the progress of that malady.

The hautboy strawberry *(fragaria elatior)* grows in several of our wild woods and hedges, and is reckoned among British plants, yet it can be scarcely considered indigenous. It is, by most writers, thought to be a native of the American woods; but it was commonly cultivated before the time of Henry VIII—a period in which few fruits were reared in England, until after Catherine of Arragon had had them imported. The beauty, both of the fruit and flower of the strawberry, had attracted the notice of Lord Bacon. Speaking of a flower-garden: "Trees," says he, "I would have none in it, but some thicket made of sweetbrier and honeysuckle, and some wild vine amongst; and the ground set with violets, strawberries, and primroses; for these are sweet, and prosper in the shade."

How beautiful now are the delicate bells of the lily of the valley *(convallaria majalis)*, as they grow, half-hidden in the shade of their two broad green leaves! These flowers are now brought in baskets for sale, into the towns, and often planted in town gardens, there to pine away from their native shades. The root of this flower is bitter, and has medicinal properties; and the juice of its leaves, prepared with lime, yields to the manufacturer a beautiful dye. By its side may sometimes be seen the wax-like, drooping blossoms of the Solomon's seal *(convallaria multiflora)*, with their delicate, green edges. Its root, called whitewort, is used for bruises, and certainly removes their blackness. Superstitious people, a few years ago, thought that the great botanist and naturalist, Solomon, had given this virtue to the plant, by stamping it with his seal; in proof of which, the herbalist would point to the marks which are to be found on the knotted root, and claim for his remedy a wondrous efficacy.

The sweet woodruff *(asperula odorata)*, with its clear, white cluster of small flowers, and its rings of green leaves, is now in bloom around the roots of trees. Its fresh leaves are almost scentless, but we have no native flower which so long retains its odour when dried. Withering says of it, that its strongly aromatic flowers, infused in water, make a beverage which far excels all the teas of China. The dried leaves, when mixed with snuff, are also said to give to it the sweet odour of the Tonquin bean—without being, as that seed is, prejudicial to the eyesight—while the scent is more lasting.

A very singular flower, called herb Paris *(Paris quadrifolia)*, now grows in moist, shady woods. From the summit of the stalk proceed four broad leaves, which form a cross. The flower, which is green, consists of four petals; and the leaves of the calyx, or cup, are four: this arrangement is so peculiar, that the flower may easily be known by this description. On account of its four cross leaves, it has the name of true-love knot. Green flowers are always of a suspicious nature; a poison often lurks in their blossoms, leaves, or fruit; nor is the herb Paris an exception. It has, however, been used medicinally, and Linnæus recommends it to the attention of the faculty. The leaves and berries partake of the narcotic principle of opium, and the juice of the berry is applied to remove pain in the eye. As a flower, the herb Paris is rather singular than beautiful; but we admire it as an instance of the wonderful variety which exists in "the flowers of the field."

The common bugle *(ajuga reptans)* is another flower generally found in the woods in May. A hardy plant it is, its purple blossoms sometimes venturing forth in January, though less vigorously than at their proper season. It also grows on moist hedgebanks, and varies with a pale

lilac, or even white blossom, the shape of which is much like that of the ground ivy. It was formerly called sicklewort, or carpenter's herb; for, in former times, when the labourer was cut by the sickle, or other sharp instrument, some plant which grew near him was employed to cure the wound, and this was found very serviceable, and is still a common remedy. A proverb was very common in France concerning this and another wood plant, "He needeth neither physician nor surgeon who hath bugle and sanicle." This latter flower, however, is known to be a positively injurious application, especially if it grow in a moist place, which, indeed is the situation in which it flourishes most.

The white flowers of the holly are now in full beauty, and the spindle tree *(euonymus Europœus)* is covered with its small green blossom. Then there are the white clusters of the cornel, or dogwood *(cornus sanguinea)*, coming out upon the red twigs of the bush, and blooming occasionally all the summer, till winter is fully in; its leaves turning red at the season when those of plants in general turn yellow. It is found more especially on chalk or limestone soils, and its wood has often been burned as an ingredient in making gunpowder. This shrub was also called gaten tree, and Chaucer speaks of its fruit as the gaten-berry. Its hard wood was anciently used for martial instruments; and Virgil has celebrated the plant as "the good and beautiful cornel."

In some of our native woods, we may find the red and black currant bushes, and the gooseberry also, all of which flower in May. The fruit of the black currant *(ribes nigrum)* is, in Kent, called gazel, and was known there, by this name, in the time of Queen Elizabeth. All these bushes grow in cold climates, and are abundant in the snowy woods of the north. The black currant is common in the woods of Russia and Siberia; not only do the Russians make wine of its berries, but the Siberians make a tea of its strongly scented leaves. The red currant *(ribes rubrum)* is planted in Essex for making wine.

But quitting the woodland and coming away into the open field, the eye is greeted by the beautiful field of saintfoin *(hedysarum onobrychis)* which is now most brilliantly red, and on which an unclouded sun throws a dazzling lustre. But the saintfoin, though cultivated in fields, is an English wild flower; it is not, however, common in Scotland. It springs up naturally, on dry and chalky soils only, its long roots penetrating between the crevices in the rock, or chalky cliff; and it is upon this kind of soil that it can be cultivated to most perfection. On several of our moors, as Royston Heath and Salisbury Plain, it is plentiful. It is not till the latter end of May that the saintfoin is in full flower on the field, and it then contrasts beautifully with the light green of the corn-field, and the deeper tint of the meadow. It was formerly called cock's-head grass, and French grass. Fuller, commenting on the vegetable productions of the different counties of England, says of it, "It is called saintfoin, or holy hay. Superstition may seem in the name, but there is nothing but good husbandry in the sowing thereof. It was first fetched out of France from about Paris, and since is sown in divers places in England, especially at Cobham-park, in Kent, where it thriveth extraordinary well on dry, chalky banks, where nothing else will grow." The plant is, in the present day, very plentiful as a wild flower, and decks the hedge-banks of some of the lovely green lanes which lie around the ancient hall of Cobham.

(To be continued.)

THE FRIEND IN NEED LIFE ASSURANCE AND SICK FUND FRIENDLY SOCIETY.

HAVING been, for some two or three years, trustee to the above Society, and having had, from my friends and agents in the country, many enquiries about it, "its security, and probable success," I will now say, that having made all enquiries on the above subject, and attended the last annual meeting, I am entirely satisfied that it is safe and secure; and as it was formed for the purpose of meeting the wants of the middle and working classes, I cannot but feel it will be a safe and sure investment. A. I. COFFIN.

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'Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE DIGESTIVE ORGANS AND THEIR FUNCTIONS.

Much of human health and enjoyment depends on digestion. While the digestion is good, many diseases are kept out of the human frame; but as soon as it is either feeble or imperfect, derangement of the whole healthy fluids immediately takes place. And hence the most skilful advisers or medical attendants will direct their attention to the stomach, and the manner in which it has performed its office. But other organs have their functions to exercise, before the stomach receives the food. And the design of the present paper is to bring under the notice of our readers the consideration of those other organs which prepare the food for the stomach. Among them we would first mention THE TEETH. These are composed of only two classes, in all *herbivorous* animals, or the *ruminantia*, such as the rabbit, the sheep, the deer and the cow. Their teeth are called *incisors*, or cutters, and *molares*, or grinders; and the names point out the kind of work they have to do. The front teeth, or incisors, cut the herbage, while the molars, or back teeth, grind it down to a soft pulp. The character of the teeth fully shows the kind of food on which nature intended any given animal to live. If we turn to the *carnivorous* or flesh-eating animals, we find additional teeth, of a very different shape. The dog, the cat, the tiger, and the lion, furnish illustrations of the structure and number of the teeth, pointing out to the intelligent observer the kind of food on which these animals were destined to live. The human teeth, in shape and number, embrace both those which belong to the herb-feeding and the flesh-eating animals; for human teeth are *incisors*, *cuspids*, *bicuspids*, and *molares*, which are commonly called front-teeth, dog-teeth, and double teeth.

The purpose for which nature has given to man these different-shaped teeth is, that the food should be cut, torn, broken up, and ground. The first organs in digestion are the teeth, and the first work of digestion is mastication. Negligence in the use of the teeth is often the cause of much inconvenience and suffering. Many persons use their teeth but very slightly, and others almost entirely dispense with them by bolting their food. And though there may be some cases, where the stomach possesses extraordinary power and allows this neglect of mastication to continue for some time with apparent impunity, yet the sad effects will, sooner or later, become painfully evident in some chronic disease which will defy the power of medicine, or in sudden death. Prevention is far better than cure, and therefore we advise the most vigorous and continued action of the teeth in eating, assuring our readers that it is impossible to chew their food too much, that a small portion of food well chewed produces more strength than a larger quantity but imperfectly masticated, and that while there is danger from too little chewing, there is no danger from too much chewing.

These considerations should lead our readers to take care of their teeth, by keeping them clean, and free from those

acid secretions which destroy the enamel and produce premature decay. In no part of the human frame is the retributive process more plainly seen than in the condition of the teeth. If they are not worked well while they are healthy and strong, one of the immediate effects of indigestion will appear in pains in the jaws and teeth, and these pains are frequently the precursors of decay and the destruction of the teeth. We knew a man who lived to the age of eighty-six, and he had a most perfect set of teeth—not a spot, or sign of decay on any one of them; and this was chiefly to be ascribed to the fact that he never would be hurried in eating. He deliberately chewed whatever he ate. He carefully cleaned his teeth twice in the day. He usually enjoyed good health, though he had an hereditary disease hanging about him, of which he eventually died. All who would avoid the immediate miseries of indigestion, and keep off its subsequent untold dangers, should take care of their teeth and work them vigorously. And if some of our readers have lost teeth, we advise that they should be supplied by artificial ones, not for the appearance, but for use.

THE TONGUE has a very important part to perform in the process of digestion. The tongue is not merely the organ of taste. It is a congeries of secretive glands, a lever for turning about the food in the mouth and lubricating the mass; to assist the macerating process, thereby softening it and reducing it to a pulp. And while the proper work of the tongue is to assist the teeth, yet even when the dental power is greatly reduced in number and energy, the tongue, by its frequent lever action, greatly helps the production of saliva, which is one of nature's solvents of our food.

And this last remark leads us to notice THE SALIVARY GLANDS. The whole of the interior of the mouth is lined with these glands. It is their province to secrete a fluid which is most useful in softening down the hard substances which we take into the mouth. They discharge in small and continuous quantities this fluid immediately they are excited by the presence of any substance and by the action of the tongue and the jaws. They perform their office well when they thoroughly saturate the food and partially dissolve it. So that in eating, the healthy man has in reality no necessity to drink at the same time, because these glands supply all the moisture that is absolutely necessary.

In fever, these glands become comparatively dry; that is, their power of secretion is diminished or vitiated, and the patient has either no appetite, or but little appetite and great nausea. Upon this part of the subject, it is necessary to observe, that in smoking and in excessive spitting, great injury is done to the process of digestion, by weakening the power of the salivary glands, or by wasting the valuable fluid they produce.

(To be continued.)

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 20.)

ON his way, Colin got work at a small village, called Ingleton, in the most mountainous part of the West Riding of Yorkshire, between Settle and Kirkby Lonsdale, where he stopped all the winter. Here nothing particular occurred, excepting that in this place he made a bet of one pound with his employer, that he would not drink beer nor any other intoxicating liquor for one week; but, alas! there were no tee-total pledges in those days, or he would perhaps have kept it. About the fourth day his appetite for strong drink was so keen that he could not continue his total abstinence another day without great injury to his health, as he then thought. Thus he fell from his long-continued sobriety of four days, and that was the longest time he was without strong drink since his fall from the horse, till the day he signed the total abstinence pledge. He got drunk, and his employer stopped the pound from his wages, and said he should give it to the poor of the parish. Colin was vexed with himself, to think that he had been such a fool, and he left his place of work, and set out for Lancaster. He could get no work there, nor at Preston, nor at Liverpool. He therefore crossed the water, and got into Wales, and he was as bad off in Wales as ever he was in all his travels, for he had to dispose of his clothes to procure the necessaries of life.

As it was in the beginning of summer, he did not feel their loss so much. At a little town in Merionethshire, called Dolgelly, they put him into a filthy bed; he got no sleep, and arose in the morning, not only tired and sleepy, but so infested with fleas, that, when about three miles from the town, and by the side of a brook, he stripped, and endeavoured to wash his only remaining shirt, in which he had slept the night before. At the brook he washed himself as well as he could, and having spread his shirt on a bush to dry, he lay down upon the grass till it was dry, as he had only that one, having sold everything for food. He fell fast asleep: to his surprise, when he awoke, the shirt was gone; some miscreant had stolen it off the bush. His other garments were tidy for a tramp, but how to do without a shirt he did not know; at last he hit upon a plan; he bought a sheet of writing paper, made a false collar with the paper, so that he looked clean and tidy. After two days he got to Merthyr Tydvil, where he obtained work. He borrowed a shirt from a shopmate until he had bought one. He found at Merthyr plenty of work, money, drunkenness, and wickedness. As he was going into a public-house by the side of the river Taff, three-parts drunk, he highly offended some Welshmen belonging to the town, who seized on Colin, carried him out of the house, and would actually have thrown him into the river, and have drowned him, had not Colin called out for assistance; his employer passing at the time deterred them. This sobered Colin, and kept him away from the public-house on the Sunday nights, ever afterwards. He worked at Merthyr Tydvil about a twelvemonth, when Mr. Slatter, leather-dresser, in Gloucester wished him to come and work for him; he promised to give him more money for his work than what he got in Wales. He accepted the offer, and took coach by the request and at the expense of Mr. Slatter. He got into Gloucester about six in the evening, after a day of snow and rain; he was so drunk when he got off the coach that he could not stand, but fell sprawling along the pavement before the hotel where the coach stopped: he was taken to the factory, after drinking another quartern of brandy, which he said was to keep out the cold, and strengthen him. In the factory there was a water-course which ran through the yard, and at night the men were ordered to draw up the flood-gates, in case the water should rise and overflow the yard. The day being very wet made it like the rapid current of a river; it being dark, and Colin unacquainted with the place, he fell in head foremost, and would have been drowned if two of the men, who had not left work, had not seen him fall in. They jumped into the water to his rescue; as the water runs for some distance under the building it had nearly carried him under when the men laid hold of him, and got him out. This sobered him a little; he lost his hat and bundle in the water; he was carried to a stove, and laid amongst the warm wool, and Mr. Slatter was brought to him. When he entered where the stove was, and saw him lying, he exclaimed, with an oath, that he was sure that he was a good one, or he would not have taken to the water in such a cold night. Colin got himself dried, and his master sent him half a gallon of strong beer with some gin, to be drunk hot. Colin's fright had left him, and he was getting drunk again. One of the men got him lodgings, and he went to bed. When he awoke in the morning, he had lost the use of his right side; whether by the cold, while riding on the coach, or by the water at the factory, he could never say. He could not walk for nearly a month after he came to Gloucester, but a doctor brought him about again, and he went to work. Nothing occurred for the next twelve months, when one day as his master and he were together, having some serious talk, he told him all his past history, and that he had a wife and child somewhere in England. He related how she was taken from him while he was in prison for debt: his master's wish was, that he should send for them, take a house, and live comfortably together, and he would give him the best of his work, so that he might furnish a comfortable home for his wife and child.

Colin took his advice, and wrote to his wife, and his master did so too. His master received an answer to his letter from Colin's wife's sister, saying that her sister would never live again with Colin;

and that it was no use either of them writing again upon the subject, for her sister never would leave Hitchin and come to Gloucester. Colin received an answer to his letter, from his wife, about a month after he wrote to her. She told him that she would come down and live with him, provided he had a home to take her to when she came there, and would pay her coach-fare and her child's from London to Gloucester. This was a little before Christmas. Colin, on the receipt of this letter from his wife, was overjoyed: he wrote to her that he should have a comfortable home for her, and that he would even come to London and meet them, and bring them down with him. He sent the letter off to his wife, with a £2 Bank of England note, and worked almost day and night to make the house which he had taken look respectable by the time she arrived. His earnings at this time were from £3 to £4 : 10 per week. The thought of meeting with those he held so dear gave him new energies. He was a long time getting an answer to the letter that he sent to his wife with the £2, and when he did get an answer it was from her sister. She coldly acknowledged the receipt of the money, telling him he was not to think any more about his wife and child leaving Hitchin, for she never would come, or the child, where he was. The letter, with the money to his wife, had been intercepted by her sister: this Colin did not find out until he saw his wife.

He showed the letter to Mr. Slatter which he had received from his wife's sister. Mr. Slatter wrote one to his wife, stating that he had taken a house and was furnishing it in a respectable manner for her reception, and that her husband was greatly altered, and seemed to be a sober man; and that if she came down to Gloucester it might be the means, he thought, of making him continue so. Colin received an answer to this, saying that she would come, and desiring him to fix the day she should be at Gloucester. He wrote telling her that everything would be complete for her future comfort in a month from that date. He therefore worked on, and his master helped him with some little articles until he had furnished his house, which it cost him £33 to do. He wrote to his wife, telling her that all was ready for her, and to come on the next Friday week, which was Good Friday. She replied that she would be at Gloucester on that day, and he was to wait at the coach-office at eight o'clock on the Friday night. This was the last letter that he got from her for sixteen years. Colin was impatient to see her; he never thought time so long as the three remaining days which he had to pass. That night he went up to the coach-office with a light heart, two hours before the time for the arrival of the coach; but, alas! how was he disappointed when the coach arrived and there was no wife or child of his—he was like a man distracted. His master was there, and told him not to be so uneasy, as she might be too late for that coach, and that, probably, she would arrive in the morning. He went home, but had no sleep that night: he got up early in the morning to wait for the coach, and when it came in it brought no tidings of his wife or child, nor any letter. If Colin's disappointment made him sick the preceding night, he was worse on the Saturday morning. As he was going down the town he met his master, who told him to go to the factory and he would speak with him at night; he had no time then, as he was going into the market.

Colin went to a broker who was an auctioneer, and told him that he wanted him that morning to sell a lot of new furniture that he had, and as he wanted money that day he wished him to sell it for him as soon as possible. The broker gave notice to the crier. The goods were all sold off by two o'clock; and what Colin had paid £33 for was sold under £11. This sum, with the money he had by him to give his wife when she came, was upwards of £20. He went as far as Cheltenham, and spent every penny of it in drinking. Neither his master nor any of his shopmates knew where he had gone to. They had searched every public-house in Gloucester for him, and not hearing any tidings of him, they thought he was gone to Hitchin to his wife. He was away for a fortnight, and when he came back he had not one halfpenny left. He got to work again, a poor emaciated being, and whatever he earned he spent in drinking, until his employer lowered his

wages, and then he would not stop. He went to Ebley, a village near Stroud, about nine miles from Gloucester, and was at work for a man of the name of Banks, when the firm of Jones and Stokes, in Bristol, wrote for him to come and work for them.

(To be continued.)

SOURCES OF CRIME.

At no former period in the history of this country has the attention of our legislators and philanthropists been so pointedly directed to the degradation and misery everywhere abounding amongst us. One remedial measure after another has been tried, and tried in vain. Each successive attempt at cure goes a little deeper than the previous one, but still the giant evil mocks all our efforts. It is now a most cheering circumstance that the uselessness of these remedies is increasingly acknowledged; and it would appear, from the following extract from "The Press" of December 19, that we may very soon expect to find the public prepared to adopt our views in regard to the necessity of removing the overpowering temptations to evil which are everywhere at work to demoralise our population:—

"The question which lies at the bottom of all these tenative experiments," observes "The Press," "forms at once the most momentous and most intractable problem of the present day. The evil, as we are reminded by a cloud of witnesses, has resisted every attempt at its cure, and expanded in spite of the most strenuous and most varied efforts for its prevention. We exhaust our ingenuity, and lavish all our means and appliances in vain. 'Those who make,' said the eloquent Recorder of Hull, in a late address to the grand jury, 'and those who administer, the laws against crime, are fairly at their wits' end—it makes such a head against them; the pendulum of punishment has swung from extreme point to extreme point, between severity and lenity; every kind of punishment that can be borne in a free country has been tried in every variation and combination; but we see that it will not do; but juvenile and adult criminals are too much for us. The cancer is in the body politic; it is spreading and approaching the vital parts. We may shut our eyes to it if we will, but there is the cancer, eating on!'

"We cannot dispute the conclusion, that ignorance and intemperance are the twin stems from which the hideous growth of crime incessantly springs. We are driven then to the mortifying confession, that the agencies which we have employed in order to eradicate these sources of evil, are inefficient in degree, or misdirected in their aim."

GARDEN FLOWERS OF APRIL.

(Continued from page 24.)

Many species of berberry are daily becoming gayer with their pretty yellow flowers, nor will they be less ornamental to the garden, when, in the autumnal season, their dark-red, pendulous fruits will glitter among the branches. Our common kind *(berberis vulgaris)* is well known, but it is in very ill repute with the farmer, as it is believed to be injurious to corn. How far this reproach is merited, is a question still much discussed by botanical writers. The injury is supposed to originate with an insect, which is very fond of the berberry-tree, and very generally found upon it, and this is thought to cause a kind of powder, which, being scattered over the neighbouring cornfield, alights upon the wheat and barley, and produces a sort of fungus, rendering the plant unhealthy, and giving it the appearance of mildewed corn. Several naturalists of eminence have advocated this popular opinion. The flowers of the common species possess stamens of so irritable a nature, that Linnæus observed them all to tend towards the central column, or pistil, if touched ever so lightly by the bee; and their singular sensibility may be easily seen, by touching one of the stamens with a pin, when they all immediately curve and meet at the point. There is a great degree of acidity in the red fruits of this plant, and they are considered to afford a good medicine in cases of fever; while they hang untouched by the birds, which do not relish their sour flavour. These fruits are used for preserves, for garnishing dishes, and, enclosed in sugar, are prepared as comfits by confectioners. A great degree of the acidity is also found in the bluish-green leaves of

the berberry. The roots yield a yellow colour, which is much used in Poland for dyeing leather; and the astringent bark and stem are valuable to our manufacturers in their colouring preparations. Sometimes the fruits of the common berberry are of a yellow colour, and occasionally they are purple in hue.

That pretty little border flower, the Venus's looking-glass *(campanula speculum)*, with its white or purple circular blossoms, is very common. From its shape, like that of the ancient mirror, this flower derived its familiar name; and as the astronomical sign of Venus was a figure of the old mirror, and the handle by which it was held, so the flower bears, too, the name of the fabled goddess. The root of this plant, like those of most other species of *campanula*, contains a milky juice. The flower grows very freely in the cornfields of southern Europe, and is very common in France and Italy, though on the former lands it is not usually quite so large as we see it in our gardens. A new species of Venus's looking-glass *(campanula lorei)* has lately been introduced into the English nursery grounds. The flower is called in France *la doucette*, and it was formerly known in this country as the corn-pink and corn-gilliflower.

Some of the more hardy kinds of that singular flower, the fig-marigold, are, by the end of the month, glittering on the stone or rockwork of the garden, and are the heralds of the hundreds, which shall, as the season advances, put forth their starry flowers. This handsome tribe has been brought to us from the Cape of Good Hope, and with its singular beauty and variety of colours, enlivens the dreary deserts of Africa. Their common name was given on account of their fruit, which is shaped like a fig, and which is eaten by the Hottentots; while the marigold is a good type of the form of most of their blossoms. From the flower opening chiefly at mid-day, and never expanding but to the sunshine, their botanic name is derived from the Greek words which signify mid-day flower.

The most common and hardy of all this large genus of flowers, is the great yellow-flowered kind *(mesembryanthemum pomeridianum)*, with its showy, golden, starry blossoms, opening in June. One of the hardy kinds is now in bloom. This is the long-horned fig-marigold (*mesembryanthemum corniculatum*), with flowers of pale yellow. All these plants require to be kept very dry, their succulent leaves deriving and retaining from our humid atmosphere, more than enough moisture to nourish them. Some of their leaves are most singular, and even grotesque, in form. They are described on the deserts of Africa as having the appearance of masses of spotted stones or shells. The colours of the flowers are not exceeded in brilliance by any tints of the vegetable kingdom; they are yellow, pink, scarlet, violet, amethyst, purple, and indeed of every tint of the rainbow.

Two kinds of fig-marigold, though requiring shelter during the greater part of the year, are very popular plants, and often deck the cottage window, beside the fuchsias and geraniums, which preside there. These are those curious species, the ice plants, which even on the warm summer day, seem as if winter had condensed his icicles on their succulent stems and leaves. One of these, the ice plant *(mesembryanthemum crystallinum)* is a biennial plant. The common frozen plant *(mesembryanthemum glaciale)* is an annual. They have both white flowers, but it is for the beauty of the crystallization on their foliage, that they deserve culture. They were brought into our gardens from Greece.

The leaves of several species of this plant contain soda. One kind especially, the knot-flowered fig-marigold, which is a native of some of the dry plains of Egypt, is burned for the great quantity of potash to be found in its ashes. This plant, as well as another species, burned for the barilla or soda which they contain, are, by the Arabic writers, comprehended under the general name of *ghasool*, signifying the washer or washing herb, and they are common not only in the deserts of Arabia, but also in various parts of Syria.

The roots of some of these flowers, especially one termed the edible fig-marigold *(mesembryanthemum edule)* are very valuable to the Hottentots, who often pull them up from their sandy soils.

One species of this plant is abundant in the very different climate of the Canadian woods. When the soil is sandy, it covers the earth like a thick mat, and when it encroaches on the spot which the colonist has appropriated for a garden, it is a most troublesome weed. It is a variety of the hour-blowing fig marigold, and sends forth a constant succession of yellow star-shaped flowers from among its thick green trailing stalks and its juicy foliage.

Kitto speaks of these flowers on the Arabian deserts as exceedingly numerous, and as exhibiting every playful variety in the form of the leaves. He says that "their aspect often presents a delightful contrast to the comfortless waste around, and the arid soil beneath them."

Not the less beautiful, because it is very common, is the lilac tree *(syringa vulgaris)*, which graces alike the poor man's cottage door, and the highest cultured garden of his rich neighbour. The old name of this plant was pipe-tree, and pipe-privet, by either of which it was known to the botanists of Queen Elizabeth's days; and it was called privet because it was usually grafted on stocks of that shrub, while its name of pipe originated with the Turks, as the stems were often used by them for their long pipes. It is called in Barbary by the name of *sirinx*, and hence we have probably the name of *syringa*. This flower is a native of Persia and other parts of the east, as well as of Hungary and the shores of the Danube. The Turks, who, in addition to the love of flowers which they possess in common with all the people of the east, have an enthusiastic regard for a flowering tree, were the people from whom we first received this beautiful addition to our gardens. It was brought from the gardens of Constantinople, in the sixteenth century, by the ambassador Busbequius, and planted in the gardens of Vienna. Being a plant which will bear a considerable degree of smoke, it was soon a favourite in the London gardens; nor is any shrub or tree more common than this, now, in the plots which lie around the dwellings in the suburban villages of our metropolis, where it flourishes exceedingly well. Even the courts and back yards of the crowded streets are often enlivened by its green leaves, though its purple clusters refuse to bud in an atmosphere so laden with fog and soot. It probably was introduced during the reign of Henry VIII, as when Cromwell caused an inventory to be made of the plants which grew in the garden of the palace of Nonsuch, there were enumerated "six lilackes, trees which have no fruit, but only a pleasant smell." Gerarde, in 1597, says of the white and blue lilacs, "I have them in my garden in great plenty." Our common English name is merely a corruption of that by which this shrub is usually called in its native Persia, where it is known as the *lilag*, which word signifies a flower. The French, too, term it *le lilas*. There are several common varieties of this species, as the blue lilac (*syringa v. cærulea*), and the purple lilac (*syringa v. violacea*), called the Scotch lilac; and as beautiful as either are the large thick clusters of the white lilac, now contrasting with the darker-coloured species, and which unfolds its fair flowers a week or two earlier than even its deeper-tinted companion. There are also two varieties with reddish-purple flowers, called by the French gardeners *le lilas de Marly*. Cowper had noticed its many hues.

> "Various in array, now white,
> Now sanguine, and her beauteous head now set
> With purple spikes pyramidal; as if
> Studious of ornament, yet unresolved
> Which hues she most approved, she chose them all."

Scarcely less frequent in our gardens, and easily distinguished from the common kind, is that species termed the Persian lilac (*syringa Persica*). It is on the hills and plains of the lovely Persia still more general than is the larger kind. Its leaves are long and pointed, while those of the common lilac are broad and heart-shaped. Its clusters of flowers are less compact, but blow loosely about in the southerly winds of April, diffusing an odour, delicious in the outer air, but which would render the atmosphere of an apartment faint and sickly. In Persia its delicate lilac flowers are much admired; and it often mingles with the rose, the narcissus, and the jonquil, in those bouquets which are sent by eastern letters as expressions of sentiment.

The Persian lilac was, long after its introduction into Europe, termed Persian jessamine, and the Italians called it German jessamine. This plant is sometimes grown in pots, and made to flower at Christmas, but by this process it quite ses its fragrance.

There are, in our gardens, two or three varieties of the Persian, besides some other species of lilac. The Chinese lilac, with purple flowers, is, as its name implies, a plant growing wild in the celestial empire: while another species is found wild on the mountains about Pekin; and a third smiles in beauty in Kumaon, near the lofty mountains of the Himalaya. These will, probably, some day grace our English gardens, as they seem likely to bear our climate.

MAY.

"All the flowers that gild the spring,
Hither their still music bring;
If Heaven bless them, thankful, they
Smell more sweet, and look more gay.

"Though their voices gentle be,
Streams have too their melody;
Night and day they warbling run,
Never pause, but still sing on.

"Wake, for shame, my sluggish heart,
Wake and gladly sing thy part;
Learn of birds, and streams and flowers,
How to use thy nobler powers."—HICKES.

How wonderful appears the change which a few weeks have now made on the face of Nature, if we compare this month, and its aspects and productions, with the comparatively bare and gloomy appearance of the garden during February and March! How has the Almighty's word been working as surely in bringing forth the bright verdure and radiant flowers from their wintry darkness, as it did when He framed this beautifully organized world out of chaos. In the northern countries of Europe, where the change is greater and more rapid, the effect is less pleasing than in the gradual transition of our winter to spring. Laing, speaking of this in Norway, says, the snow is painfully bright to the eyes under "the sunshine. When it melts, vegetation bursts forth at once; but the patchy, unpicturesque appearance of the country, with a knob of a rock here, and a corner of a field there, appearing through the white covering, deprives us of the pleasing impressions of an English spring. The rapid advance of vegetation is more astonishing than pleasing. It is not agreeable to step thus, all at once, from dead winter to living summer, and to lose the charm and interest of the gradual revival of all that has leaf or wing."

In many tropical countries the change from the winter to the early season is little marked, for when the trees are evergreen, and the flowers always bright, there is less variety in the aspect of the season. The gradual coming of leaves and flowers in our climate, and their no less gradual decline, is to the year what the morning and evening twilight are to the day. We should never estimate the shortness of life were it not for the changing aspects of things around us.

May is universally hailed by the poets as the loveliest month of the year, and its coming seems to revive in some the freshness of life, and to make them feel young again. Many sweet and familiar flowers now spring up day by day on the garden bed, and some very beautiful shrubs are dressed in their garlands of blossoms. The scarlet hawthorn blushes like the rose, and it is merely a variety of our wilding May. The dark lilac still contends with the snowy balls of the guelder rose, and on the low boughs of the Judas tree *(cercis siliquastrum)* the beautiful pink flowers are clustering in abundance. Its large showy leaves are eaten on the continent in salads, as are also those of the Canadian species by the settlers in the woods. The flowers have a slight and agreeable acidity, and are in France fried in batter and eaten; while the wood, finely veined with black and green, takes so good a polish as to be well adapted for the cabinet maker, and the young branches are used for dyeing wool.

Not less beautiful than either of the preceding flowers are the golden clusters which now hang down from the laburnum *(cytisus laburnum)*. This plant, which grows very abundantly on the Swiss mountains, is called by the French *cytise des Alpes*. The wood of the laburnum is so very valuable that it has been a matter of surprise that the tree should not have been cultivated for its timber. Even though growing to a comparatively small size in our country, it is very useful for many purposes. The Romans thought

this wood next in value to ebony; and though this is not so hard as that wood, yet, from its durability, furniture made of it is stronger than that manufactured of mahogany. The blossoms of the laburnum are very fragrant, and their hue gave to it the common country name of golden chain. Many persons are affected with headache by their odour, and the seeds have a powerful influence on the human constitution. Happily, they have not the pleasant flavour which might render them attractive to children; yet the writer of these pages once saw two little ones rendered very ill by having eaten laburnum seeds, and it required the prompt use of medical remedies to prevent more lasting effects on the constitution.

Another species of the laburnum, commonly called in our country the pigeon pea, produces seeds which are much eaten by the negroes and poor people of the West Indies, while they are often given to horses and other cattle, which thrive exceedingly well on them. In the island of Martinico they are served at table as a dish for the rich, who prefer them even to the green peas of our country. Both our wild and cultured broom plants are, by many writers, considered as species of the *cytisus*. The Scotch laburnum *(cytisus alpinus)* has larger leaves and flowers than the common kind. It is frequent in our gardens, and blossoms a month later than that. The Italians name it after this month, as we do our hawthorn, for with them it blooms in May.

A very common flower—to be found, indeed, in almost every garden—is the red spur flower, or red valerian, commonly termed Pretty Betty. It has long been known to botanists as *valeriana rubra*, but is now called *centranthus rubra*. It varies in all shades of red, from crimson to palest pink, and is sometimes of a pinkish or yellowish white. Its large clusters of blossoms are composed of a great number of small flowers, and they are to be seen through all the summer months, as late as September. It blooms on the heights of Mount Vesuvius, and enlivens the ashy soil of the barren spot by its cheerful tint. It has been seen too by the British traveller in Northern Africa, and awakened reminiscences of the garden plots of his native land. The scent of this species, as well as that of some other kinds, is very fragrant.

Another species, called the Celtic nard, or nard valerian *(valeriana Celtica)*, has a root far more odorous than this, and which is stronger when the plant is growing on its native Alps than in the moister soil of our garden ground. It is a native of France, Italy, and Switzerland. Its roots, which are black, are imported from the mountains of Austria into Egypt, whence it has been carried both into Africa and Asia. It is valued by the Orientals as a sweet-smelling drug, and much used, especially in Egypt, for perfuming the baths, in which the people of that country spend so much of their time. There seems much reason to believe that the spikenard of the ancients, as well as the fragrant root called by the modern Hindoos nard or Jatamansi, is the root of a plant of the valerian family, and thus this plant is by some writers considered to be the spikenard of Scripture, which Solomon describes as "sending forth a pleasant smell," and which was one of the sweet essences with which Mary anointed the dead body of our Lord and Redeemer.

The root of our common wild valerian *(valeriana officinalis)* possesses very great medicinal power, and its odour is very strong, but disagreeable. It is cultivated in Derbyshire, for medicinal purposes, but the root is preferable in its wild state to that under cultivation.

Some very pretty species of lobelia are in blossom in May; several of this genus are among the handsomest of our garden flowers. Some are lowly-looking, simple blossoms, scarcely peeping from above their leaves; others are tall and showy. A few of them are blue, but the greater number are of a bright scarlet or pink colour, while some among their number are of a full yellow. One of the most common, and also of the most striking beauty, is that called the cardinal flower *(lobelia cardinalis)*, with its long slender leaves, and spike of blossoms, so bright in hue as to have reminded the originator of its name of the scarlet cloth of Rome; while its shape is not altogether dissimilar to the hat of the Romish ecclesiastic. It

is a native of Virginia, and was described by Parkinson, in his "Garden of Flowers," where he calls it a "brave plant." The species brought from Mexico, the fulgent lobelia *(lobelia fulgens)*, and that brilliant flower called the splendid or shiny lobelia *(lobelia splendens)*, with a tint outrivalling that of the brightest poppy, and its foliage marked with purple spots, is another Mexican species, and these are the handsomest of the tribe to be found in our gardens.

Almost all the lobelias are natives of tropical climates, many of them being the wild flowers of the West Indian islands. Several of them have been brought from the Cape of Good Hope, and others grow in the warmer regions of South America. A few of their number require to be kept in the greenhouse.

A milky fluid, in greater or less quantity, exists in every individual of this species of plant, and it is of so acrid a quality that the whole tribe may be considered as of a dangerous nature. One species *(lobelia tupa)*, a native of Chili, yields a virulent poison; and one of the most powerful medicines used in North America is the juice of the inflated lobelia, which, unless given only in small doses, proves fatal. So deleterious is the beautiful white lobelia *(lobelia longiflora)*, that when taken internally it causes death; while if the hand which has touched it be unguardedly placed on the eye, it produced a violent inflammation. This flower grows wild on moist places, and by stream-sides in the West Indies. Like the common reed of our native land *(arundo phragmitis)*, its presence is, most probably, indicative of an unhealthy atmosphere, as the moist spots in the West Indies are always unfavourable to health. It adds much, however, to the beauty of the lands where it flourishes, and delights the lover of flowers by its beauty, but it also renders the pasture very dangerous to horses, which are sometimes allured by the verdure around it to graze upon these plants, and soon fall victims to its powerful poison. This is so often the case, that the Spanish Americans give it a name significant of its destructive effect on those animals. Our beautiful cardinal flower contains a dangerous poison. One species of lobelia is smoked by the negroes, and termed Indian tobacco.

A very common border flower now, is the spiderwort *(Tradescantia Virginica)*, which, as its name implies, is a native of North America, and very general in several parts of that country. It is there often called by the name of the "life of man;" because, like that, though beautiful it is brief, for it soon withers. Its botanic name stands as a record of John Tradescant, gardener to Charles I, who introduced several plants into England, and this among others; and whose museum of curiosities is celebrated as the earliest collection of that kind made in our land. It is now in the Ashmolean museum of the University of Oxford.

We have several garden species of spiderwort. None are found wild either in Europe or Northern Asia, but several are brought from the East Indies and Ceylon, and others from America. Some of them have rose-coloured blossoms, but they chiefly vary in all the shades of blue. They are not a very handsome tribe of flowers, and our common species is as ornamental as any, its dark blue petals and yellow anthers showing to advantage among its glossy green leaves.

During May, and the following months, the different species of viper's bugloss exhibit their handsome purple, violet-coloured, or pale blue flowers. None are more beautiful than our wild kind, *(echium vulgare)*, but many are very ornamental. The red viper's bugloss, which, however, is not yet in flower, is a showy plant, though the stems and leaves are rough with bristly hairs. It grows on the steppes of Russia, for those vast regions approaching the Black Sea, though dreary from the absence of trees, are enlivened with a variety of flowers, of which this is among the most conspicuous. Dr. Clarke says he saw it here, and it was in other parts of Russia more common. It grows chiefly among corn. The women of the Don use it in painting their cheeks, the root, while fresh, yielding a bright vermilion tint. Gmelin recommends its transplantation and the application of its colouring properties to objects of more importance. The reddish brown substance

contained in this plant, is now much used by dyers; and one species of the viper's bugloss, which has been naturalized in Brazil, is used, like our wild borage, to give coolness to liquids in which its leaves are steeped. Some species were used by the Romans for dyeing.

We have more than twenty species of bugloss in gardens. Blue is the prevailing colour of their flowers, but some which have reached us from the Cape of Good Hope, the Canary and Madeira islands, have red or white blossoms.

(To be continued.)

CORRESPONDENCE.

To Dr. Coffin,—Dear Sir, I beg most respectfully to communicate to you the success I have had in the practice of Medical Botany, both in my own case, and others who have placed themselves under my care. If I were to delay longer, I should consider myself as bad as many who have been cured by Medical Botany, and have never been at the trouble of writing their cases to be published in your valuable Journal. My own case is as follows:—In the beginning of March, 1855, I got a severe cold, which brought on pleurisy (that being a complaint I have been much troubled with formerly, often bled, blistered, and physicked by the faculty). However, I got a sweat and a lung medicine, which gave me relief; but it soon turned to inflammation of the lungs. I then found it to be hard work, in the dead of night—not able to lie down—my wife and children crying round me, and saying, "What must we do? what must we do?" I told them to give me some cayenne in hot water, which they did—a large teaspoonful; I then told them to prop me up with pillows. After this I went to sleep for a few minutes; when I awoke I was a little easier; then they gave me some more, and at nine o'clock I took another dose. At about eleven, a friend, who often assists me in giving vapour-baths, assisted my wife in giving me one. While in the bath, he wept and said, "We must not lose you, we must not lose you." After being in the bath about fifteen minutes, I was put to bed; but not being able to lie down, I did not perspire; consequently I was dressed, and lay on a sofa, and took my medicine, until evening, when I went to bed. I had improved so much, that I was able to lie down, with an extra pillow. I slept till two o'clock; when I awoke I was as wet as I possibly could be; then I was stripped and rubbed well. After this I went to sleep again until half past five; at which time I was as wet as before. Of course my linen was changed, and I was well rubbed down again; after which I was much better, and lay awhile, and then got up and lay on the sofa during the day, and took my medicine regularly. The night following, I was to strip at two, and half past five, as the night before. After which I perspired no more, but regularly improved until I went to work. After I had been at work a few days, I began to purge very much; but did not vomit at the first. What I parted with was like rice-water filled with wind. Now, Sir, I did not allow myself to go on for sixty hours without something, as it appears, in the 176 Journal, that Edward Clayton did. I took anti-cholera powder, but that did not stop me; then I tried an emetic, but it came back immediately. After awile I tried lobelia again, and that stopped a short time and came back; then I took more, and when I had pain in the bowels, I had an injection given me. And by persevering in this way I was enabled to conquer, though many of my neighbours thought I never should be able to get through; for there had been some here who had died of inflammation of the lungs, and there was one in Metham who began with pleurisy, and died of inflammation of the lungs in a week's time under the treatment of the old schools. Wherefore I feel grateful to Almighty God, for making you the founder of a system of medicine which is calculated to do a great amount of good in little time, and for little money. Now, Sir, I think I have given you a full statement of my own case. I shall just mention a few others that I have had under my care, such as fever, consumption, rheumatism, dropsy, scurvy, dysentry, and the cholera; also jaundice, liver and stomach complaints. Many young females have also received benefit through the system of Medical Botany, as propounded by you. I should very much like to give you some of the above cases in full detail; but I have not asked permission so to do; therefore I will say no more at the present, only that you will, by inserting the above in your valuable Journal, greatly oblige your humble servant—Jonas Hirst.

Metham Mills, April 14th, 1856.

N.B.—I have had to give certificates to some who have been at a distance from their lodges, and they have been received.

To Mr. Marsh, Agent to Dr. Coffin, Boxford, Suffolk.—Dear Sir—It is with feelings of gratitude and sense of duty to the public, that I am induced to bear my humble but willing testimony to the efficacy of the Botanical System of treatment of disease, as practised by you. In the month of February, 1855, I caught a severe cold, which, combined with an old complaint, compelled me to give up work. I applied to one of the most eminent of the faculty, and for nine months continued taking his medicine; but instead of getting better, I got worse. It appeared both to myself and friends, that death would be the sequel. At this juncture I heard of your success as a Botanical practitioner, and lost no time in securing your attendance. You promised to do all you could for my recovery; and this promise you fulfilled. After taking four bottles of your medicine and a box of pills, I was so far recovered as to follow my employment; and now, thank God, I am quite restored. Thus, in a very short time the Botanic Practice, under your superintendence, was the means of

effecting a cure in a disease which had baffled all the skill of the so-called skilful allopathist.

I am, dear Sir,
Yours faithfully,
JAMES ROPER.

Little Waldingfield, Suffolk, 21st April, 1856.

To Dr. A. I. COFFIN.—Sir,—A feeling of gratitude induces me, with your permission, to proclaim through the *Botanical Journal* the benefits my family have derived from Medical Botany. Previous to attending your course of lectures in Ebenezer School-room, Ratcliff Highway, I had two children very ill, brought on by colds: in fact, we did not expect them to live many days. They were attended five weeks by Dr. Webb, of Poplar, when a friend to your system called and persuaded me to let him try what Medical Botany would do for them. He soon effected a change for the better. In two weeks they were convalescent, and the eldest, aged 19, went to his work, which convinced me that Dr. COFFIN's system of Medical Botany was better than Dr. Webb's, or all the rest of the doctors put together. I attended your lectures and bought your invaluable "Guide to Health," which shall be my "guide" for the future. About this time my eldest son was again taken ill, which proved to be the smallpox; I treated him successfully, according to the directions laid down in the "Guide" for smallpox, and he recovered and went to work on the 24th of March, just fourteen days ill. On the 31st of March, another child, a girl, six years of age, was taken with the smallpox, was completely covered with pustules and blind for about two days. This was a very severe attack. I treated the child precisely the same as her brother, and she recovered in three weeks. They were both properly vaccinated in infancy. On the 9th April, my youngest child, a boy, aged nine months, not vaccinated, was attacked, and, like his sister, was completely covered, and blind for two days. He recovered in rather less time than his sister. These cases prove to me that vaccination is no protection against smallpox, which induced me to send a petition to Parliament, detailing the treatment as laid down in your "Guide to Health" (see 28th Report, Public Petitions, page 25), and protesting against compulsory vaccination, and the two Medical Bills now before the House. I received a polite note from Thomas Duncombe, Esq., M.P., stating that he duly presented the petition, and in the prayer of which he entirely concurred. Sir, with the information which I have obtained from your instructive and interesting lectures, and from the "Guide to Health," I doubt not I shall be able to prescribe for my family in future, and dispense with the old-fashioned poisons and depleting doctors for ever, Dr. Letheby included.

Mr. Stephens, of Ratcliff Highway, can corroborate this statement, as he very kindly called several times to see the patients.—I am, Sir, very gratefully, yours, ROBERT EAGLE,

Labourer at an Ironfoundry.

5, *West Street, West India Dock Road, Poplar, May 3rd*, 1856.

VARIETIES.

EDUCATION.—I consider a human soul without education like marble in the quarry, which shows none of its inherent beauties, until the skill of the polisher fetches out the colours, makes the surface shine, and discovers every ornamental cloud, spot, and vein, that runs through the body of it. Education, after the same manner, when it works upon a noble mind, draws out to view every latent virtue and perfection, which, without such helps, are never able to make their appearance.—*Spectator*.

HOME LOVE.—Home love has a sweet poetry of its own, created out of the simplest materials, and haunting more or less the secret recesses of every human heart; or rather it is divided into a thousand separate poems, full of individual interest, and little quiet touches of feeling and golden recollections interwoven with our very being—common things, hallowed and made beautiful by the spell of memory and association, and owing all the glory to the halo of our own fond affection. The eye of a stranger rests coldly on such revelations, their simple pathos is hard to be understood; and they smile oftentimes at the quaintness of those passages which make others weep. With the beautiful instinct of true affection, home love retains only the good. There were clouds then, even as now, darkening the horizon of daily life, and breaking tears of wild stories above our heads; but we remember nothing save the sunshine, and fancy somehow that it has never shone so bright since! There are not in the unseen world voices more gentle or more true, that may be more implicitly relied on, or that are so certain to give none but the tenderest counsel, as the voices in which the spirits of the fireside and the hearth address themselves to human kind.—*Anon*.

NOTICE.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street-East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury branch.

NOTICES TO CORRESPONDENTS.

S. H. DELO is our accredited Agent for Faversham.

POST-OFFICE ORDERS and all communications for goods &c., to be addressed to William B. Ford, 134, High Holborn.

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COFFIN'S

BOTANICAL JOURNAL

AND

MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE DIGESTIVE ORGANS AND THEIR FUNCTIONS.

(Continued from page 26.)

The office of the organs in and about the mouth is to prepare the food and to carry it to the stomach. The teeth should break up the food, and grind it—the tongue should stir the mass and help to macerate it—and the salivary glands, when in a healthy condition, should supply a fluid which is the best primary solvent for every kind of food fit for the human constitution, whether vegetable or animal.

The other organs or agents of digestion we shall next notice are THE PHARYNX, THE ESOPHAGUS, THE STOMACH, THE LIVER, THE GALLBLADDER, THE PANCREAS, THE DUODENUM, THE SMALL INTESTINES, THE LARGE INTESTINES, THE LACTEALS, THE MESENTERIC GLANDS, THE THORACIC DUCT.

The pharynx is the large cavity at the back of the mouth, which is the upper part of the esophagus or gullet. In this cavity there are six passages; two leading to the nose, two to the ears, one to the windpipe and one to the mouth. The whole of this chamber is lined with a mucous membrane, and supplied with glands. The opening into the windpipe is called the *glottis;* and a little valve, attached to the back part of the root of the tongue, is called the *epiglottis*. It is like a small finger over the entrance to the breathing-tube. It is supplied with nerves and muscles, which promptly act to close the aperture to allow the food to pass over into the gullet, or swallow. It often happens, while eating, that, from a relaxation, and consequent feebleness of the small muscles attached to this valve, a very small particle of food will get under the valve, which produces great irritation and coughing. Hence, when this happens, it is very commonly said, "the crumb or food has gone the wrong way." It has entered the wrong turning, and sometimes much inconvenience is experienced in putting it right. But every time we swallow food, however much it may have been moistened by the saliva previously supplied, there is a fresh charge of moisture given out from the pharyngal glands.

The esophagus, or gullet, is the tube behind the windpipe, which conveys the food to the stomach. It is made up of two layers of muscles, a membranous covering, and a mucous membrane. The structure is remarkably well adapted to the work it has to perform. The external layer of muscle is perpendicular, or lengthway, and the internal layer is horizontal, or crossway, round it, and in this respect bears a resemblance to the gullet of any other animal. It has the two properties of elasticity and strength, so that it contracts or expands, as circumstances require. It has, by this arrangement, the capability of forcing the food into the stomach, and preventing the inconvenience which would arise from having a lodgement of food in its way to its proper place.

The stomach is a strong, muscular bag, something of the form of the windbag of the bagpipes. It of course varies in size in different persons, but it is usually capable of containing three pints of food, and sometimes considerably more. It is situated in the upper portion of the ab-

domen, the large end being near the ribs on the left side, and its small end near the centre of the chest. It consists of several membranes laminated together; two of them are muscular, the one crossing the other at nearly right angles; by means of these the stomach contracts or dilates, as necessity may require. Among the Africans, we find the use of the hunger-band —a belt which is pressed externally over the stomach mechanically to contract it— to diminish the cravings of hunger, when they have failed to obtain food in the chase or the river. Its action is not very unlike that of the sack which is used when nuts are cleaned. There are also serous, nervous and mucous membranes; the last is the internal membrane, which is disposed in loose folds, and contains the vessels that secrete the fluids necessary for digestion—a mucous fluid and the *gastric juice*. This latter fluid is very peculiar in its production and in its character. It is transparent and colourless, slightly acid, and, in its healthy state, is a solvent for almost any kind of food. The nervous membrane and the bloodvessels of the stomach completely interlace the whole extent of the sack, and chiefly contribute to its energy and action. The two apertures of the stomach are the *cardiac*, or ingress, and the *pylorus*, or egress; the former is immediately attached to the esophagus, and the latter to the *duodenum*, or entrance to the intestines. The *pylorus*, or gatekeeper, is supplied with a valve which possesses the extraordinary faculty of opening to allow all properly-digested food to pass, but closes against all food that is not properly decomposed.

The liver is a large gland on the right side of the upper part of the abdomen, and by its secretion of bile, and discharge of the same, performs a most important part in the work of digestion. The *bile* is secreted from the venous blood, and treasured up in the *gallbladder* for use. The food, when it is in a fit condition to leave the stomach, is called *chyme*. It is the office of the bile and pancreatic fluid, of which we shall speak presently, to produce a chemical change, separating the nutritious from the innutritious, and preparing that rich, cream-like fluid called *chyle*. All the veins of the digestive organs combine to form a large trunk, called the *vena porta*, which spreads its branches through the liver, secreting bile in its passage. It will not be surprising to those who will carefully study the subject, that indigestion should affect the liver, and bring on all kinds of hepatic or liver disease, and that then a reaction should take place, and, from the incapacity of the liver to perform its appointed work, chronic indigestion should then set in, and induce many forms of suffering with which it is difficult for medical science to grapple.

(To be continued.)

LOBELIA INFLATA.

Editor's note upon a few lines in page 34 of the last number of this Journal.

The Journal bearing date May 17th was printed May the 10th, a week before the date of issue. It was printed thus early to prevent disappointment arising from the Whitsuntide holidays. This will account for the oversight of a few lines which are not correct, but, being a part of a quotation, they escaped notice. The words are, "the juice of the *inflated lobelia*, which, unless given in small doses, proves fatal." This is quite contrary to the testimony of some of the most eminent scientific men in this and other countries. It is contrary to the daily experience of those who understand the principles and practice of Medical Botany. Dr. A. T. Thomson, in the "London Dispensatory," Mr. Andrews, in the "London Medical Gazette," and Dr. Pereira, in his "Elements of Materia Medica," all concur in bearing their testimony to the great value of Lobelia Inflata. It is a powerful medicine, but it is entirely destitute of any poisonous properties whatever.

DEAR BREAD.

The food question is one in which all are interested. It comes home to every one, although to some much more seriously than to others. Those who have a large income, or a sufficient fund for emergencies, may not, indeed, have their comforts decreased, or even their luxuries lessened, when the price of provisions attains to such a height as it has been for some time past; but it is very different with those who have only a stinted salary, or nothing

but their daily wages wherewith to procure the daily bread for themselves and families. With such it becomes a question as to the bare necessaries of life; and hunger and want frequently follow. There are multitudes of the working classes who find it no easy matter to keep the wolf from the door at present, and who have been in similar circumstances the greater part of the winter—and the difficulty has been growing as time ran on.

The causes of this advance in the price of provisions are various, and some of them sufficiently obvious. The Russian markets, as a matter of course, are shut against us; exportation from several other countries from which we were accustomed to draw supplies is prohibited; there has been a general deficiency in the corn crop of the continent; and our own harvest was undoubtedly not an abundant one. America is still open to us, and has stores of grain to dispose of; but there the price is high, as the result of the demand from this side the Atlantic—a demand in which the continent competes with us. In this state of matters, if previously there was no waste of grain in this country, there must necessarily now be a deficiency, and a corresponding advance in price. The price has advanced very greatly; and but for one thing, it need not have been so to any material extent. We refer to the destruction of bread-corn in the manufacture of intoxicating drink.

The waste in this way is truly fearful. On the testimony of those engaged in such manufacture, we might give it at upwards of eight millions of quarters. It is allowedly not less than six millions. This is an amount of grain of which we cannot well form any idea. One of the best notions of it is obtained from such an illustration as that given by Mr. Beggs, in his recent lecture in Bristol; when, taking the quantity of grain consumed at only five millions of quarters, or forty millions of bushels, and each bushel at eight shillings, he showed that it would realise the sum of £16,000,000; and taking the quartern loaf at 8d., would purchase three hundred and eighty-four millions of such loaves—sufficient to afford two pounds of bread to two millions of persons every day in the year. Now, it so happens that the average importation of grain, during the last five years, has been short of six millions of quarters; so that, in these years, the amount of grain destroyed in our breweries and distilleries has exceeded our importation; and had there been no such destruction there need have been no such importation. And supposing that a stop were put to such waste, and that the last crop were nearly the average of the last five years, we should have as much in our own country as would supply all our wants; and if the crop be below that average, we should have only that slight difference to make up by importation. What we call attention to in regard to this waste of food is applicable not merely to the present time, but to all circumstances; although it is only when such a dearth as the present occurs that it is brought prominently before us. The land now employed in growing barley and hops would be suitable for growing wheat or other produce; and matters would soon adjust themselves to the supply of what was most in demand for food; and so employed, the produce would more than make up for the deficiency which this year we find to exist.

We would call the man a fool who should cast a sovereign, day by day, into the tide; and we might seek to reason with him, or perhaps to hinder him; but if he should bring the amount of bread or bread-corn which the sovereign would purchase, and cast *that* into the water, the community would rise on him, and forcibly prevent such a sacrifice of the staff of life; and when they gave their reason for doing so—that he was wasting food—they would feel that what they said was quite sufficient to justify their conduct. In the same way, the crime of setting fire to a stack-yard is deemed a most heinous one; and once when that practice was prevalent, one of our statesmen declared that the man who destroyed a portion of the food of the people, thereby increasing the price of what was left, was a criminal of the deepest dye. The general convictions of mankind, as certainly as the word of God, go to shew, that the *proper* use of bread-corn is for *food*. It is a sadly perverted state of feeling when people can regard the

destruction of it, in such quantities, unmoved, whilst scarcity exists, and many are almost starving. One would imagine that the only time at which it could be considered right so to treat the precious grain, would be after all the population had obtained a superabundance; and if such a state of things should exist, it were better far that the bread-corn were cast into the sea, than that it should be manufactured into intoxicating drink.

This vast amount of grain, which, if thrown into the market, would so lower the price of bread, is *worse than wasted.* In its natural state, and used for its proper purpose, it has a blessing in it—that which is made from it has proved our country's curse. On every hand we see the fruits of this perversion of God's bounty. The pulpit and the press, the judge and the jailer, alike proclaim evil the most fearful as the result. Not a class of the community but it has injured. It has taken the bread from the children, and given them worse than a stone; while it has destroyed natural affection in the hearts of parents, and made their offspring miserable and criminal. Did the heavens pour out their rain as our corn approached to ripeness, and first lay it upon the ground, and then cause it to sprout, so as to threaten its utter destruction; how earnestly we would cry to Him who sendeth the rain that he might restrain its coming, that our harvest might not be a heap in the day of grief and desperate sorrow. And yet the evil would be nothing to that which is done by ourselves; when, after the grain has been gathered in, we spread it out, and water it, and cause it to grow in the malting process—doing the very thing which we pray God not to do—for, all the issue in the field is the destruction of the grain; while in the other, there is, by still further treatment, the production of an article which is the fruitful source of sin and shame, of misery and death. Yes, the good grain, the precious bread-corn, is *worse than wasted;* it is made an instrument of fearful evil, and terrible iniquity.

There is one bearing of the question to which we have not yet adverted—the effect of this perversion of bread-corn upon trade and wages. It is worthy of remark, that there is scarcely any manufacture in which so little goes for wages to those engaged in it as the manufacture of intoxicating liquors; for every £1,000, market value, of such liquors, it has been computed that there goes but about £80 for labour; while, for a number of other things in daily use, the average proportion of the £1,000 value which has gone for labour is upwards of £500. Mr. Brotherton stated, in the House of Commons, January 22nd, 1847, that of twenty shillings spent in spirits only 8d. went for labour; but that if twenty shillings were spent on articles of manufacture, from 6s. to 10s. went into the pocket of the artizan who had assisted in their production—that is, at the very least, nine times as much. This fact regarding the production of intoxicating liquors is not to be lost sight of; for, if the money spent on these were spent on other articles, there would necessarily be a greater demand for labour, and consequently a rise in wages. But the matter has another bearing and another aspect. When provisions are high in price, the artizan and the man of limited income—supposing even that they spent nothing on drink—are unable to spend as much as when provisions are cheap, on clothes, furniture, and various articles which tend to their own comfort and that of their families, and which at the same time increase the demand in the various branches of trade and manufacture in our country. The great advantage to trade and manufactures consequent upon an abundant harvest is well known—so well known that those engaged in these would rather hear good tidings as to the crop at home, than be told of heavy orders from abroad, with the prospect of a scanty harvest here. And this arises from the abundant harvests lowering the price of provisions, so that the mass of the population have more to spend on other things, for which the demand is increased. As that demand increases, wages rise, and the addition to wages goes to enable the working classes to procure those articles which tend to their own comfort, and which their fellow-artizans are engaged in manufacturing, or which commerce brings to our shores from other lands. The result is, that master and man, mer-

chant and trader, producer and consumer are alike profited, and an abundant harvest is felt to be a general blessing. Yet an abundant harvest would be a greater blessing were no part of it wasted in the manufacture of intoxicating drink; for, not only would there be a greater abundance, making food cheaper—leaving more for other things, and thus stimulating trade and manufacture—but the money spent in drink would find its way into channels where it would be more generally useful. Thus the destruction of bread-corn has an effect doubly evil, in lessening the means by the dearth of food, and thus lessening the ability to obtain those things which would give an impetus to trade and manufacture, and still further lessening the means by taking away for drink what might be better spent. And if all this hold, even when there has been a good harvest, how much more when there is a scarcity, or when markets from which an abundance of grain might be got are shut against us, or afford us food only at prices consistent with a time of dearth!

We ask our readers, in the view of these things, if they are prepared to see this waste going on, and especially at such a time as this? and if they are not, what they intend to do? Might not Government stop the use of grain in breweries and distilleries, as they have done before, and done with the best results; not only in keeping down the price of provisions, but in lessening crime? Have they not a precedent for present action in France, and not a precedent, but an argument also? for, are we not suffering more than we otherwise would by the destruction of our bread-corn, in order that the French may have the spirits which are forbidden to be made from their own produce? Why should we not press upon our Government this duty, which is the more important in consequence of the heavy pressure of war taxes? We would urge our readers to such a course at once.

And if our readers are prepared to do this, we ask them to go a step further—to do for themselves, so far as they can, what they ask the Government to do. The Government should be willing to hear the will of the people on this point, and to carry it out; but if they should not, the people may do the thing for themselves. The nation could do it at once, so far as home consumption is concerned, by ceasing to use the drink. And every one can do his part in this way to make the loaf cheaper, and have more to get it with; while, if any are prepared, as we think all ought, to go and ask Government to interfere to prevent the waste of what the people need and must have in order to prosperity, to comfort, and even to very existence, would not consistency require that with such an application to Government there should be combined an abstinence from that, the manufacture of which so perverts God's bounty, limits the food of the people, contracts trade, and lessens wages, and at the same time is the source of many and mighty evils to our country? And might we not find in all this an argument for having nothing to do, not only now, but for ever, with those drinks which cause such a waste, and lead to such evils; and for seeking, as opportunity may afford, that a final stop be put to the manufacture and sale of them altogether?

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 29.)

Colin went to Bristol and worked for Jones and Stokes for about three months. They, however, were like Pharoah; they made their servants' lives bitter with hard bondage, and sent them, as it were, to gather straw where they could find it; and yet the work was not to be diminished. One of the men who worked in the factory had got a little money, and he wished Colin to join him in a partnership, and do a little for themselves in the sheepskin rug manufactory: the man, whose name was Crates, was to find money, and Colin was to find judgment. They both left Jones and Stokes and went to the Baptist Mills, a little out of Bristol. The place had been a leather factory before, and, being on the river, was in all respects very convenient for their concern. Colin was acquainted with some of the hawkers who used to purchase rugs at Gloucester; and after it was

made known that he had begun to dress rugs at Bristol, they came and bought them of Crates and Co. When Mr. Slatter (of Gloucester) heard of it, he sold to the hawkers his rugs at a great sacrifice to injure Crates and Co. At last Mr. Slatter sent to Colin, saying, if he would come to Gloucester again, that he would reinstate him in his work. Colin saw how things were going on, for they seldom sold half a dozen rugs to a hawker but both Crates and Co. got drunk with him. Colin wished to be out of the concern. Although he was a drunkard, he was very timid. They had been in partnership four or five months; their capital was about £60 when they began trade, and when their books were made up before they dissolved partnership, their assets were about £25, and their liabilities were about £50; so Colin had nothing to draw. He set off for Gloucester, and commenced work again as a journeyman. While he was away from Gloucester, there were two letters for him from his wife's sister, which Mr. Slatter had sent to Bristol: the first gave an account of his wife and child being very ill with the smallpox; the second of their death. Colin was apparently resigned, but yet it grieved him to think that they should not have seen each other again in this world. The more he thought on the letters, the more he doubted the truth of them. His master thought they might be credited, and he advised him to get another wife: he said that the law could not do anything in it, as he had got a letter from her sister certifying that she was dead. But Colin kept himself single; indeed, he could not have supported a wife, for he drank his money as fast as he earned it. For a considerable time he used daily to drink sixteen quarts of strong beer and do his work. His appetite was so strong for intoxicating liquors, that when he had no money or credit, he would get some of the workmen who had money or credit to get a quart of beer for him, and he would give a shilling to him for it on pay-night.

While some labourers were digging holes in a yard to sink some tan-pits, they came to a place where there were a number of human bones found; amongst them was a skull of some great man—as Colin said, for it was uncommonly large—and one of the labourers offered Colin a gallon of beer if he would drink it all out of the man's skull, and if he did not drink it all he was to pay for the gallon of beer; if he did the other was to pay for it. Colin got the skull, washed it clean, and drank every drop of the beer out of it, using it as his glass. He drank the gallon of strong beer in twenty minutes. He kept the skull for a length of time as a drinking cup, till one night he had the delirium tremens. He was, as he declares, wide awake, when he saw a ghastly spectre enter his bedroom, and with a hollow voice accost him in these words, "Scotsman! where is my skull?" He jumped out of bed, and called for the landlord, declaring that the Evil One was come and had got hold of him. His landlord came into the room—there he saw Colin holding the bedpost, and pulling with all his might. His landlord pacified him and got him into bed again; but it was no use to lie, he said, as the room was full of devils, and he would get up. It was then between three and four o'clock in the morning. Colin got up and went into the town, where there was a public-house which was kept open all night for the accommodation of passengers who passed through Gloucester by the night coach. He there got a quart of old strong beer warmed, and half a pint of gin or rum put into it, and that chased the horrors away from him.

One day a cart laden with wet pelts came into the factory. It was Colin's place to see to them. Three parts drunk, and yet showing where they were to be put, he got behind the cart, taking off the tail-board; by some means or other, the fastening, which had been undone, caused the cart to tip up, and upset all the skins upon him; the bottom of the cart had caught his thigh and broken the bone right through, and the wet pelts buried him to the chin. The men who were there, took him by the shoulders to pull him out, did not think that his thigh was broken, and by pulling him out they dislocated his hip. When the pelts were taken off him, then they saw how it was done—the place where his thigh was broken was jammed between

two stones. He was then taken to the infirmary, and when the surgeons examined the broken thigh, one of them said that was not the worst of it, for his hip was out of joint. Colin found it so, for the pain and trouble of getting the hip-bone into the socket far exceeded that of setting the broken thigh. He was allowed both beer, wine, and porter, while he was in the infirmary; and it was seven or eight months before he could walk without his crutches. In the course of a twelve-month from the time the accident happened he was as well as ever. A little after he got better there was a gentleman of the name of Thompson came to Gloucester, to give a lecture on the evils of the corn-laws; Colin's master, a great Tory and Protectionist, gave out that if any of his men went to hear this Mr. Thompson, he would turn him off his premises. But Colin and some of his shopmates went and heard the lecture: their master said but little, but on pay-night he told them that he should be compelled, by the depression of trade, to take off twenty-five per cent. from their wages for the future. Colin would not submit to his master's proposal, and he left Gloucester in search of employment. He thought of going to London, and had got as far as Witney, near Oxford, where he found employment. He was at work in Witney about six months, when Mr. Slatter sent for him to Gloucester again. The total abstinence movement was now beginning to dawn on England, and in Gloucester there was a gentleman of the name of Samuel Bowly—one of the Society of Friends—whose exertions are almost unequalled in the history of teetotalism; he made proselytes by words and deeds of charity, which will be on record long after his dust is mingled with its kindred earth. At almost every teetotal meeting Colin was sure to be there to disturb it, having been hired by some publican to do so for a quart or two of beer. But Colin's conscience was not seared as with a hot iron; whenever he got sober it would upbraid him much. Mr. Bowly used to say, "Never mind the Scotsman, he will at some future day be a consistent teetotaler." Colin told Mr. Bowly that before he would be a teetotaler, he would sooner have his arm chopped off, for he was one of the moderators, and he would continue to be a moderator as long as he could get anything to drink. Mr. Bowly asked him what his moderation was. He told him, sixteen quarts of sixpenny. Mr. Bowly asked him if he ever got drunk. He was answered by a person in the meeting that he saw the Scotsman taken home in a wheelbarrow, and the man that wheeled him upset him into a duck-puddle, and that it was only yesterday; and how it was well known to all the meeting that he was then drunk. The following week Mr. Bowly saw him four successive days drunk every day. The next time he came to a teetotal meeting, Mr. Bowly told him of his moderation, and he set Colin down for a confirmed drunkard. He went on in this manner for nearly two years, when, one day, the worse for drink, going into the engine-house, he stumbled, and, to keep himself from falling, thrust his hand out to lay hold of something, when the cogs of a wheel, which was revolving at the time, caught his hand between the two wheels, and split it up to the middle of the palm. If the engineer had not at the moment thrown a large stone into the flywheel, which stopped the engine in an instant, his shoulder would have been drawn off from his body. He was taken to the hospital, where he remained five or six weeks, and, after he had left, it was two weeks more before he could resume his work. About this time he had some serious thoughts: he tried to reform himself: resolved that he would give up drinking, intending not to get drunk so often as he had been in the habit of doing, and that he would turn religious, and go to some place of worship on the sabbath day: but then he had no clothes but what he worked in, and those were dirty and torn—there were patches upon his trowsers, sewed on with packthread, or rather tied. However, he applied to his master to lend him the money he wanted, to buy some necessaries, and to make him appear decent on a Sunday. His master gave him an order on his tailor for a new suit of clothes. His clothes came home on the Saturday night, and were to be paid for in six months, by his leaving four shillings weekly in his master's hands. This he could do very well; but the worst of it

was, that shopmates generally came to his lodgings every Saturday night, where he had to pay a great many of them; the most of them being drunkards, Colin had to give them so much liquor, as a footing for the new clothes; and first one would look at them and handle them, and then another would like to have a sight of them: at last, one who had got the trowsers to look at, took them and threw them upon a large fire, in a frolic—one leg of them was burnt entirely off—they were rendered useless to him, and, in the midst of the scuffle, a lamp that was standing on the table, full of oil, was upset upon the new coat, and a jug of beer was spilt over the waistcoat. Colin was disappointed in his purpose of going to a place of worship. He was afraid to meet his master on the Monday morning, as he was on the look-out for him on the Sunday, to see if he did attend public worship. What to say to his master he did not know, and to keep as near the truth as he could, he told his master that they were brought home, but they did not fit him. His master ordered that they should be sent back, and, if they could not be altered, the tailor should make another suit. Colin got the coat cleaned, as well as it could be done, but it still smelt of the oil, and the more so when near a fire; the waistcoat was all stained with the beer. The coat and waistcoat, which cost £3 : 15, were not now worth ten shillings, and he had to buy a pair of new trowsers.

(To be continued.)

GARDEN FLOWERS OF MAY.

(Continued from page 35.)

The geraniums, or, as they are more properly called, the pelargoniums, flower throughout the summer. We have about six hundred distinct species, but most of them are grown either in the greenhouse or in the in-doors apartment. We received the plant from the Cape of Good Hope, where their handsome flowers are in great profusion; but new varieties are every year raised from seed in England. The myrtle, too *(myrtus communis)* is opening its fragrant white blossoms. It has several varieties, of which one of the best is the Roman myrtle. This shrub grows wild in the south of France and Spain, in Italy and Greece, and in northern Africa; while in many parts of Syria it is very abundant, as we might infer from the numerous allusions made to it in the sacred writings. All travellers in the east notice its luxuriance. On the hills which lie about Jerusalem, forming its natural protection, and which were to suggest to the Hebrew the remembrance that God was thus round about his saints, the white myrtle spray is seen in profusion, amid its dark-green boughs. Banks of rivers, hill-sides, wide plains, and valleys among mountains, are all rendered sweet by its odour. Mrs. Piozzi admired the beauty of this shrub, too, near Pisa in Italy, where, she says, the mountains are mountains of marble, and the bushes on them bushes of myrtle, as large as the hawthorn. In Devonshire the myrtle thrives well in the open air: Carrington thus notices it:—

> "And there in liveliest green attired,
> Smiling like Hope, and cheering the glad eye,
> The meek, unsheltered myrtle sweetly blooms."

The poet adds, that several houses in Marychurch, and indeed in almost every village on the southern coast of Devon, are profusely bespread with it.

By the middle of the month, the Peruvian heliotrope *(heliotropium Peruvianum)* shows its delicate lilac flowers, and perfumes the air with its scent—a scent so powerful, that it is scarcely to borne in a room. It resembles that of new-made hay, or of cooked fruit. It was termed by the Latins, *verrucaria*, because its expressed juice, mingled with salt, was used to cure warts. We have other species of heliotrope, but this and the species termed European *(heliotropium Europœum)* are the most general, and the latter is more hardy than the Peruvian. Its flowers are paler, and it is a native of southern Europe. The ancients named these plants from the sun and "to turn," and the old writers assert, that the blossoms always follow the sun. The heliotropes require protection during winter.

Our common marigold *(calendula officinalis)* is indeed so common, that we almost regard it as a weed in the border, and the gardener eradicates many of the young plants, which have arisen from the readily dispersed seeds of the last

summer. Some of the double varieties of the common marigold are very handsome flowers, and so also are the deep orange-coloured blossoms of the starry marigold *(calendula stellata)*. The common species grows wild in fields and vineyards in Italy, and pretty generally in cultivated lands throughout the countries at the south of Europe. It is called by the French, *souci du jardin*, and by the Germans *goldblume*. It is still mingled by cottagers with soup and broth, but was once much more generally used for that purpose. The idea that it tended to "comfort the heart and spirits," recommended it not only as a medicine, but induced good housewives to dry its yellow petals as a store for winter. Its properties are sudorific, and it was deemed a preventive to infection. A distilled water, a conserve, and a kind of vinegar, are still obtained from its blossoms, but its young leaves are not now eaten, as they formerly were, for salads.

Our old poets call this flower golde and mary budde, as well as marigold This last name it received from the absurd and popular tradition that the Virgin Mary wore the flower in her bosom.

Elliott alludes to the use which the cottagers make of the marigold.

"There is a flower, the housewife knows it well."

And thus describes its closing during wet weather:—

"It hoards no dew-drops, like the cups of May,
But rich as sunset, when the rain is o'er,
Spreads flaming petals from a burning core;
Which, if morn weep, their sorrowing buds upfold
To wake and brighten when bright noon is near."

This closing of the flower during the rain, as well as its habit of folding up its petals early in the afternoon, while it does not open them till after nine in the morning, was remarked not only by Linnæus, but had rendered the flower a theme of various comparisons to the older poets. Thus Herrick, alluding to the approach of evening, says:—

"No marigolds yet closed are,
No shadows yet appear;
Nor doth the early shepherd's star
Shine like a spangle here."

The marigolds received their name on account of their flowering during the calends of each month. The common marigold, indeed, is in bloom in every season, except when snow covers the ground, and is often among the brightest flowers of the garden in December and January.

The Cape marigolds are natives of that part of Africa after which they are named. The small Cape marigold, *(calendula pluvialis)*, which is the commonest of them, was called the rainy marigold, by Linnæus, because it is always closed, not only during rain, but under a cloudy sky. The rays of this flower are white inside, and of a dark purple on the outer surface. It blooms from June till August.

The French term the marigold *souci* (care); but in the reign of Henry VIII it was called souvenir, and ladies wore wreaths of these flowers, intermixed with the pansy, whose name, derived from the French word *pensée* (thought), was also indicative of remembrance.

And now in this pleasant month we see the different mallows assume their tints of deep red or purple, pink or white, and, more rarely, of yellow or orange. They are beautiful flowers, and all possess, more or less, the mucilaginous property which renders some so useful in medicine. They are of easy culture, and some so hardy as to grow in any soil, in any situation. Several of the most handsome species are brought from the Cape of Good Hope, and the fields of southern Europe have supplied us with others.

The Egyptians, Chinese, and Syrians, are said by travellers to use some kinds of mallow as food. Thus Biddulph, an old writer quoted by Dr. Royle, says, "We saw many poor people collecting mallows and three-leaved grass, and asked them what they did with it, and they answered that it was all their food, and that they boiled it and did eat it." The leaves of the common mallow of our roadsides *(malva sylvestris)*, a plant which is found wild from Europe to the north of India, is still used in Hindostan for food. It is well known that, at the table of the ancient Romans, some kinds of mallow were served up as vegetables.

Many of our common garden mallows produce, in autumn, very beautiful specimens of skeleton leaves and calyxes, the green parts having withered away, and

left bare the bundles of vessels which form the framework. Of the macerated fibres of some of these plants, a cloth and stuff have been made, superior even to those made of flax. This is the case especially with the ivy-leaved mallow *(malva mauritiana)*, whose pink flowers are sometimes found in English gardens, and were brought from the south of Europe. The curled mallow *(malva crispa)* of Syria, and the Peruvian mallow *(malva Peruviana)*, both of which are cultivated in England, have been used for the same purpose. The former species was once planted in kitchen gardens for food. It affords remarkably strong fibres, which have been manufactured, not only into thread for spinning, but also into cordage for vessels. The French chemist, De Lisle, gave great attention to the mallows, and recommended that the fibres of various kinds should be used instead of rags in making paper. So interested was he in this project, that he had a volume printed on paper made wholly of the fibre of the mallow, and presented it to "L'Académie des Sciences." But the members of the academy, while they admired the skill and science of the experiment, did not consider the mallow-paper as likely to be generally useful.

These plants, boiled as food, were formerly considered so wholesome, that Horace commends them for their salutary properties. They were eaten by the Romans and Greeks with lettuce, and "were used," says Baxter, "to decorate the graves of our ancestors." "So indispensable," adds this writer, "were they deemed to each domicile of the living, that as a matter of ill omen, the poet exclaims:—

'Alas! when mallows in the garden die!'"

The plants termed lavatera, are very similar to the mallows in general appearance. There are some showy annual species common in gardens, and the shrubby kinds are very ornamental. The species which is most generally cultivated is the sea-side lavatera *(lavatera maritima)*, which is a native of Spain and the south of France, and will bear the open air of this country if slightly guarded from frost. The tree-mallow *(lavatera arborea)* has a magnificent appearance when covered with its large, purple rose-coloured flowers.

The beautiful, delicate flowers of the large number of exotic heaths are, during this and the next month, unfolding their bells on their brittle stems, and the greenhouse is quite gay with their flowers. They are, with few exceptions, natives of the Cape of Good Hope, where they grow chiefly on the tops and sides of mountains, and in the crevices of rocks. This genus of flowers is quite of modern introduction into this country. Miller, in 1768, enumerates but five species. They are now very numerous. "Till the latter end of last century," says Loudon, "this genus consisted of three or four humble British shrubs, and the heath of Spain *(erica Mediterranea)*, a slow-growing tree; but when the Cape of Good Hope fell into the hands of the British, collectors were sent out, and soon brought to light some hundreds of species. It may serve as an easily recollected date, to say, that all of them were sent home during the reign of George III. Some of the heaths are very fragrant, and our common British heaths are, as well as the exotics, very beautiful flowers.

'Sometimes with bells like amethysts, and then
Paler and shaded like the maiden's cheek
With gradual blushes;—other while, as white
As rime that hangs upon the frozen spray.'

These bear the bleakest winds of the moorlands; and all heaths, growing as they do, when wild, on open lands, require so much air and light, that, as has been said of them, 'it may be taken as a proverb, that heaths like to feel the wind between every leaf.'"

The andromedas, some of which blossom in this month, are very similar to the heaths, and are very ornamental little plants, or low evergreen shrubs, chiefly natives of North America. Several of them grow wild in Lapland. The moss-like species *(andromeda hypnoides)*, which has the apperance of a beautiful moss, spreads over immense tracts of ground on the higher regions of Lapland, adorning them with its red blossoms, which, with many other lovely blooms, thicken their surfaces, and are included by the Laplanders under the general name

of renblomster, or reindeer flowers, as that animal feeds on the pasturage where they grow. The marsh species *(andromeda polifolia)* is a native of some parts of Great Britain, and is the most common in the garden. Linnæus found it in Sweden, and names it as decorating the marshy grounds during summer, in the most agreeable manner. The flowers he describes as of a bright-red colour before expansion, and, when full-grown, of a flesh-colour. Scarcely any painter's art can, he says, so happily imitate the beauty of a fine complexion. This great botanist portrays, in a very interesting manner, in his "Flora Lapponica," his discovery of another species *(andromeda tetragona)* which he found on the celebrated mountain Wallivari, in the district of Lulea. "Whilst I was walking quickly along, facing the cold wind, at midnight, if I may call it night, when the sun was shining without setting at all, still anxiously inquiring of my interpreter how near I was to a Lapland dwelling, which I had for two hours been expecting, though I knew not its precise situation, casting my eager eyes around me in all directions, I perceived as it were the shadow of this plant, but did not stop to examine it, taking it for the empetrum *(crowberry)*. But after going a few steps farther, an idea of its being something I was unacquainted with, came across my mind, and I turned back, when I should have again taken it for the empetrum, had not its greater height caused me to consider it with more attention. I know not what it is that so deceives the sight on our Alps, during night, as to render objects far less distinct than in the middle of the day, though the sun shines equally as bright. The sun being near the horizon, spreads its rays in such an horizontal direction, that a hat can scarcely protect our eyes; besides, the shadows of plants are so infinitely extended, and so confounded with each other, from the tremulous agitation caused by the blustering winds, that objects, very different in themselves, are scarcely to be distinguished from each other." Linnæus describes the flower as shaped like a lily of valley, but with five sharper divisions. Barren and dreary as are some lands in the north of Europe, yet many beautiful flowers are found on their hills, or in their dark pine forests. Linnæus speaks with rapture of the verdure and flowers of his native land, and Olaus Rudbeck was so well satisfied with its beauty, that, instead of thinking that the garden of Eden lay amid the palm-trees and the roses and jessamines of eastern lands, he discovered that one part of Sweden had certainly been the scene of the original Paradise!

And now the large dark-purple bells of the climbing cobæa *(cobæa scandens)* hang over the trellis of the arbour, and its foliage helps to cover the garden wall. The Mexicans, among whom this handsome plant grows wild, call it by a Spanish word, signifying the violet-bearing ivy. It received its botanic name from Barnardes Cobo, a Spanish Jesuit and naturalist of the seventeenth century. It is very remarkable for its rapid growth. Even in the open air this is very striking; while in a conservatory, it has been known to increase in length, two hundred feet in the course of a summer. This was long the only species cultivated in Great Britain; but in 1840, the seeds of two others were sent to England from Mexico, by one of the collectors of plants for the London Horticultural Society.

And now, if the border be tolerably well sheltered from the north and east winds, the splendid tiger flower *(tigridia pavonia)* will spread its handsome petals to the sunshine. Its colours, so like the skin of a tiger, originated its name, and this plant, with its variety *(tigridia pleona)*, and the *tigridia conchiflora*, are amongst the most magnificent flowers of this month. They are all natives of Mexico, and if the bulbs are kept dry, they may remain in the ground all the winter. Their tints are red and orange, and their flowers very abundant, but also very frail, lasting but a few hours. The edging to the garden plots, which are composed of thrift, are now very gay with the pink tufts of blossom.

The box too has now its green flowers, so often said to be poisonous to the bee which sucks their nectar, and it is a far better plant for the garden border than either thrift, Virginian stock, or any other substituted for it. In addition to

its being an evergreen, it is very hardy, and when once a good edging is made, it will last for many years, needing little attention from the gardener, except the annual midsummer clipping. If we wander through the deserted gardens of some ancient castle or mansion, whether in England or almost any other part of Europe, where the flowers of the olden time waved their petals to the summer wind, we find some of their hardiest successors, as the wall-flower, the pansy, and the columbine. And there too we see the wide box edgings, planted by hands which have long since mingled in the dust, and their borders perhaps, though they are not in such trim order, are as healthy and as verdant as they were a century ago, when the dwarf box was extolled for "bordering up a knot," and was considered "a marvellous fine ornament to a flower garden." The species used by gardeners for this purpose is the dwarf box *(buxus sempervirens nana)*, being merely a variety of the hardy box-tree of our native woods, which too seems to have been in the gardens of England from the earliest period. It was formerly cut, especially by the Romans, into those various figures in which the gardeners of the olden times so much delighted. Few of them apparently would have agreed with Lord Bacon: "I, for my part," says he, "do not like images cut out in juniper or garden stuffe; they be for children." Modern taste, justly preferring the graceful wildness of nature, rejects the custom of clipping trees into the shapes of birds or animals, or of cones and pyramids, yet the old yew or box, which still retains its place on the terrace of the ancient dwelling, has a charm of its own, whispering to the heart of other days, and leading the mind to dwell on England in the olden years, and to muse on the changes of things and feelings, which time is ever making, as he marches onwards to mingle into eternity.

(To be continued.)

Few minds are sun-like, sources of light in themselves and to others. Many more are moons, that shine with a derivative and reflected light. Among the tests to distinguish them is this: the former are always full; the latter only now and then, when their suns are shining full upon them.

MILK SUPPLY OF THE METROPOLIS.

"A milk-walk for sale." This advertisement, which occasionally finds admission into the columns of the newspapers, is a little perplexing to those who are not familiar with London and its usages. A milk-walk might be a milky walk, milky way, or *via lactea*. If sarcasm could be supposed to have any place here, London milk and the milky way might be said to have a certain analogy, in so far as they present to view a thin, bluish tint, having little of a creamlike appearance. The truth is, that this phrase is one of the conventionalisms so profusely employed in daily commerce. "The good-will of a milk-trade for sale;" this is what is meant. A dairyman counts upon the patronage of some dozens, be it more or less, of customers, who purchase from him their daily supply of milk. He has no rightful claim to insist on this custom; he has no copyright, so to speak, in his customers; but he has a fair chance of being called upon to supply them three hundred and sixty-five times in a year, or perhaps double this number. When he offers a "milk-walk for sale," he simply sells his chance; no one of the customers is bound to transfer allegiance from the old milkman to the new. It is true that he obtains, occasionally, a kind of despotic power over them; he chalks cabalistic marks on the railings or the doorpost, or on a tally-stick, denoting the number of small portions of milk supplied on credit; and this chalk-score is a kind of mortgage of their future custom, which may be discounted or rendered of marketable value. A London boy, holding a gentleman's horse, will sometimes "sell his chance" to another boy for a halfpenny; under the supposition, entertained by both, that the gentleman will give a penny. Something analogous to this is the sale of a milk-walk. Mr. Braithwaite Poole's estimate of the quantity of milk consumed may well astonish by its vastness those who are in the habit of regarding this beverage as a trifling article. The consumption in the United Kingdom—comprising only such as is used in the form of milk, and excluding cheese, butter, &c.—is roughly taken at 1,150,000,000 quarts annually. Mr. Poole assumes that an average milch cow yields seven quarts of milk as a daily average; and that the average retail price is 3d. per quart; and from these data a result is arrived at that the whole supply requires 450,000 milch cows, and that the retail value amounts to the prodigious sum of £14,000,000 per annum. But limiting the inquiry to London, the same authority assumes that the carefully reared cows that furnish most of the supply for the metropolis yield nine quarts per daily average; that the number thus employed is 24,000; that the quantity of milk consumed is about 80,000,000 quarts annually; and that the consumers pay no less than £1,600,000 for it. – *The Food of London.*

POST-OFFICE ORDERS and all communications for goods &c., to be addressed to William B. Ford, 134, High Holborn.

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE DIGESTIVE ORGANS AND THEIR FUNCTIONS.

(Concluded from page 38.)

If the liver be in a healthy, vigorous condition, there is not much danger to human life; but if, on the contrary, the liver be affected by any disease, and consequently its action becomes impaired, unless it can be restored to its organic health and functional vigour, life must be kept in constant jeopardy. All alcoholic drinks should be avoided if the health of the liver is to be preserved. Alcohol, in any form, has the property of neutralising those unctuous secretions which are the vitals of the liver.

The pancreas, or sweetbread, is a gland placed behind the stomach, by which is secreted a fine, delicate fluid, not very unlike the saliva in the mouth, and probably intended to supply the deficiency of this fluid. It is called the *pancreatic juice.* This fluid combines with the bile, and flows slowly into the *duodenum*, where a chemical change takes place in the food. That portion of the food which nourishes the system is separated from that which is to be passed off from the body. The duodenum is the first twelve inches of the small intestines, joined to the pyloric end of the stomach. This is the alembic in which the great change in the food takes place. It is here the tubes of the liver and pancreas meet, and here the food is converted into that nutritious material, called *chyle*, to which we shall again have occasion to refer. The duodenum, like the stomach, is provided with several membranes, or distinct layers. There are two muscular coatings, an external covering, and a somewhat loose, mucous, membranous lining, all so arranged as to facilitate the decomposition and passage of the food.

The small intestines, of which the duodenum is the upper portion, are small tubes, made of the same number and character of membranes as those just described. They are arranged in convolutions, like coils of rope, between the *mesentery*, a membrane which is secured to the back-bone, and which holds up the smaller intestines, that contain the nutritive properties of the food we take.

The large intestines are joined in continuation from the small ones, so as to prevent any retrogression of the contents. They are just double the size of the small ones, and are arranged in a large fold around them. They are the great ducts or conduits for carrying off from the constitution all the waste or innutritious portions of the food by which the completion of the process of digestion is brought about.

The lacteals are countless little vessels, spread out upon the inner surface of the smaller intestines. Their office is to take up the chyle, and, in order to pass it onwards, to mix it with the blood, and for this purpose they are all connected with the *mesenteric glands*, which all contribute to the *thoracic duct.*

The mesenteric glands are two sets of small, glandular bodies, placed between the folds of the *mesentery.* The lacteals communicate the chyle to these glands, and here deposit all the nutriment which they can collect. It is the office of the mesenteric glands to impel the chyle and

lymph into the duct, which conveys them to the venous blood. THE THORACIC DUCT is, considering the work it has to perform, an exceedingly small tube, not larger than an ordinary-size quill. It has, however, a complex piece of machinery internally, to prevent the retrograde motion of its contents. Several valves are placed at short distances, to facilitate the progress of pure nutriment to the human frame. It is a perpendicular tube, reaching from the loins to the shoulder, where it bends to pour, or rather to drop, its contents into the left jugular vein. In this way nutrition is produced and conveyed into the constitution.

We have thus presented a detailed view of the digestive organs and their respective functions. The studious reader must be impressed with the very long and tedious process by which digestion is carried on. It will not be matter of surprise, that many and painful are the instances of indigestion. Some of the attacks of dyspepsia may arise from hereditary weakness of some of the digestive organs, which can be overcome only by care and perseverance in the use of some vegetable corrective, and judicious attention to the selection of appropriate food, and care in mastication. But the greater number of cases of indigestion will be found to arise from a neglect of self-management. Sometimes more food is taken than there is power to digest: excess is more dangerous than deficiency. Persons do not sufficiently discriminate. They eat as freely of one kind of food as they do of another, because they may be fond of a species of food, of which they ought to eat only very sparingly, because of its close texture and indigestible character. These remarks are particularly applicable to veal and pork, but mostly to the latter; and yet it is known that there are persons who, for three or four days together, will eat no other meat but pork, and then express their astonishment that they have heartburn, flushed cheeks, and other most undoubted signs of indigestion. The same kind of food should not be eaten more than two days successively. To vary the substantial food is one means of preserving the organs of digestion in good health where they are so already, and of aiding the recovery of those whose strength has been impaired. Too much attention cannot be paid to mastication of all kinds of food, but especially to those which are distinguished by a natural closeness or toughness. If, from the loss of teeth, persons cannot completely masticate, the deficiency may be easily supplied by attention to two things; viz., to cut the food exceedingly small, and then to turn it over and over in the mouth, and thus well saturate it with saliva before it is swallowed. To those who can afford to obtain artificial teeth, it is most desirable they should, as some who have resorted to this means have found the new teeth to answer the purpose so well that their health has speedily improved.

PALMER'S TRIAL AND THE FUMBLING OF THE FACULTY.

WE do not pretend to give our opinion on the justness of the sentence which has been passed upon Palmer, or upon the manner in which his advocate endeavoured to intimidate the jury, and drive them to give a verdict in favour of his client. Our attention for the present is directed to the testimony of medical men, and to the manner in which that testimony was delivered. Neither the one nor the other appeared to be that of men who had arrived at the certainties of science, and therefore had clear evidence to give, and could give it with decision and firmness. France and Germany have been cognisant of the chemical and medical evidence, which during the last month had been adduced in the Central Criminal Court; and we have reason to know that they have not received a very exalted opinion of our national science from the specimens which the late trial has furnished. Other nations may admire and covet our trials by jury, and the fairness with which justice is administered in our law courts; but they must, in the same ratio, despise us for our small attainments in science, if they are allowed to take the late evidence as furnishing a fair specimen. It is well known by scientific men, that between certain portions of the human frame and certain medicines there are strong affinities. But in the recent trial, testimony was fearfully at fault on this point; some men declaring that strichnia, if administered, would leave at least a *trace* in the

liver and kidneys; some asserting that it would be found in the brain and spinal chord, because of its strong affinity with the nerves; some telling the court that it was utterly impossible to detect long after it had been taken, and others professing to be able to detect it in its infinitesimal quantity. Such discrepancies were sufficient to confound and distract any jury, because they were under oath to arrive at their verdict according to "*the evidence given.*" Notwithstanding the high position held by some of these witnesses, they were most of them incompetent for the task they attempted to perform.

We think that the eyes of our readers must be opened to one fact; namely, that where medicines are in frequent use among a certain class of men, medicines which are admitted universally to be virulent poisons, the lives of those who consult them are placed in constant danger. Any bad feeling arising between patient and attendant, any base design conceived, any mercenary motive pressing, may be a sufficient cause for using the deadly agent under the cover of medicine, and that with small probability of detection, since the certificate forwarded to the registrar is filled up by the medical attendant, and he may enter bronchitis, pneumonia, hepatitis, or any other disease he pleases. It is one of the advantages of the system of Medical Botany that there is not a deadly poison in the whole of its materia medica. Dr. COFFIN has fully demonstrated that, notwithstanding the inuendoes, insinuations and impeachments which have been brought against him and the system he adopts, there is not a possibility of poisoning any one by the medicines prescribed.

ANOTHER MARE'S-NEST; OR, THE LATE INQUEST AT HARTLEPOOL.

THE trial of Palmer has absorbed nearly the whole attention of the country; but at Hartlepool there are found a few wiseacres who imagined they had discovered a second Palmer in the shape of "a COFFINITE." The turf has its slang; and a body of men, making some pretensions to the exclusive prerogative of exercising the healing art, has its slang also, from which we quote the word "COFFINITE." Its meaning, in their vocabulary, is, any person on whom they can pounce and make a scapegoat for their blunders, such person being previously known to have declared, that he will neither administer nor cause to be administered to himself or any member of his family any poisonous drug whatever. A COFFINITE is, however, as well acquainted with English law as most persons, and knows that, in this country, a man cannot be seized, imprisoned and executed without having a trial by jury. If it were not for this provision, more than one half of the assumed curers of the people would give up the pleasures of the turf for that of the chase, and devote the remainder of their lives to hunting COFFINITES, as our ancestors were accustomed to hunt wild boars, and offer a price on the head of any one of them to any hind or villain who would capture them. These hunters, a numerous pack, are sometimes *at fault*, and instead of catching a COFFINITE, *they* are caught, and manage to escape very limpingly.

We shall furnish our readers with the details of the inquest on a woman, who died under circumstances, any one of which might be sufficient to cause death, and yet the only person who afforded the patient relief is impeached as accelerating her death. The circumstances which might have caused death are these: the neglect at the time of her accouchment; the imprudence in washing the floor of her room the day after her delivery, and washing clothes on the third day; the want of necessaries on such an occasion; the clot of blood on the brain, and the administration of antimony or some other poisonous medicine. Any one of these circumstances might have caused death. But a good Samaritan, in the person of Mrs. Brockies, visits the sufferer—administers to her relief—and, in the sight of witnesses, mitigates suffering; and because she happens to be a COFFINITE, Mrs. Brockies is pounced on by one of the hunting pack, and dragged before a coroner, who must fall in with the cry, and barks most furiously, though he dare not bite.

We complain of the manner in which Mr. Coroner Settle *settled* this business. A *post-mortem* examination of the de-

ceased was ordered. Who is present at that examination? Dr. Moore. Who is the party to give evidence of the condition in which the body was found? Dr. Moore. Who has given medicine containing antimony to the deceased? Dr. Moore. Then we have the unheard-of and unconstitutional fact of a man giving evidence in his own cause. Is the county of Durham so destitute of men of science and men of integrity, that the coroner could find no man to examine the body of Mrs. Holloway, and to report the result, except it be Dr. Moore? The jury fully and entirely acquitted Mrs. Brockies, because there was all possible information given to them relating to the medicine which Mrs. Brockies administered; but they were kept in the dark in reference to the medicine Dr. Moore administered. If coroners will act upon such *ex-parte* evidence, the sooner they are removed from office the better for the country and the true interests of humanity. The coroner, in the case under consideration, showed a partiality and an evident leaning to hold Dr. Moore guiltless, and to brow-beat Mrs. Brockies and the whole race of COFFINITES.

The demon prejudice has, in this as in many other cases, had a fling at the system of Medical Botany. This monster loves the darkness, and only now and then comes into the dim twilight of a coroner's court, but when it does, it raves, and bounces, and foams, and will ere long commit suicide. Then the hunting pack will howl and lament; for their chief scent-finder will be gone.

We now call the attention of our readers to the proceedings before the coroner, and to the letters from Mrs. Brockies and Mr. Holloway, the husband of the deceased.

INQUEST ON THE DEATH OF A FEMALE.

Another public inquiry, resulting from a dabbling in medical matters by ignorant persons styling themselves "Medical Botanists," "agents of Dr. Coffin"—appropriate term—&c., took place in Hartlepool, on Monday afternoon, before J. Settle, Esq., coroner, in connection with the death of Mary Holloway, aged twenty-seven, wife of Thomas Holloway, labourer, residing in Northgate-street. The parish doctor, Dr. Moore, who had been attending and prescribing for the deceased woman, had been supplanted by Mrs. Brockies, the wife of Thomas Brockies, tailor and "Coffinite," residing in Northgate-street, and whilst under her treatment the deceased expired. It was deemed necessary to have an inquiry into the circumstances, which accordingly took place, and the following evidence was taken:—

Edward Spence, relieving officer, said that on the 10th inst., when he first saw deceased she was insensible. On that day the husband applied to him for a doctor, stating that his wife was in labour. He promised to send one, telling the husband that as he was an able-bodied man he would have to refund the sum of 10s. to the parish. On the 12th Dr. Moore, the parish doctor, whom he sent to the deceased, called upon him and informed him that the deceased had been confined above a week, and was in a very distressed state, and expressed his belief that the husband neglected her. He (Mr. Spence) went to the house on Tuesday morning the 13th, and found her lying upon the boards, with a bit of straw beneath her, and a piece of old cotton quilt over her. She was then insensible. He supplied some necessaries, and gave the husband an order for 7s. 6d. worth of goods, with injunctions to get certain articles for the deceased, and to give her the medicine as ordered by Dr. Moore. On Wednesday afternoon he went down to see her, and met at the door the husband, who, in answer to his inquiries, said that his wife "was just about the far end of it." He asked Ann White, who was waiting upon the deceased, whether she had administered the medicine; to which she replied that she had. The deceased appeared to him to be better that day. On Thursday the husband came to him and said that his wife was a good deal better; and, in consequence of this, he (Mr. Spence) promised for her a bed-tick and two chemises, giving the husband 7s. 6d. in cash. He was then informed that Mrs. Brockies was administering to the deceased other medicine than that supplied by Dr. Moore. Ann White gave him the bottle which Mrs. Brockies had brought, saying that she had not given any of the contents to the deceased. This

bottle he took to the police-station and gave to Sergeant Faint. He then went to Mrs. Brockies' shop to see Mrs. Brockies, but she was in bed—so the husband told him. He stated to the husband what he had heard about deceased receiving medicine from them, and cautioned him not to give her any more, as Dr. Moore was attending her. He (Brockies) stated that they would administer medicine "when they liked, in spite of him or Dr. Moore." He answered that they had no right to do so, and that if the woman died they might "find themselves wrong." Brockies replied that they "would consider about that." He then left, and saw the deceased no more till after her death.

Ann Hogan stated, that she went in to see deceased after she was confined, between two and three weeks ago. She was doing as well as a woman could do. On the following day she saw deceased with a tub of water, washing the floor and the hearth. On the third day after her confinement she saw her washing clothes in the house. She said to deceased, that "it was as much as her life was worth," and deceased replied, "No; she has always been so before."

Ann White, wife of Robert White, labourer, was engaged to attend upon the deceased on Sunday, the 11th. She found her insensible, and lying upon a piece of straw with very little covering. She attended deceased till her death, yesterday morning, about half-past three o'clock. She saw some medicine in the room. Deceased had not any on that night to her knowledge. On Monday she was speechless and insensible, and had not any of Dr. Moore's medicine. She was told by deceased's husband not to administer any of that medicine to his wife. He didn't give her any reason, but said that Dr. Moore had told him that he could do his wife no good. On Monday night the husband went for Mrs. Brockies, who returned with him, and brought some medicine with her in a pint bottle, and told the husband that if any more of Dr. Moore's medicine were given to his wife, she "would be a dead woman." Mrs. Brockies then gave deceased a tablespoonful of the mixture she had brought—forcing open her teeth with a tablespoon, and inserting the medicine with a teaspoon. Deceased was still insensible. Drs. Moore and Stamp visited the deceased on that day, and Mrs. Brockies, who was in the room at the time, and heard them coming up stairs, hid herself in a closet in the room, saying that the doctors would not speak out if she remained in sight. When she came out of the closet, she said that deceased would be a dead woman if the doctors gave her any more medicine. On the Tuesday, witness, under the direction of the husband, administered four doses of Brockies' medicine to the deceased, whose mouth she had some difficulty in opening to make her swallow the draughts. Mrs. Brockies attended upon deceased that day. There was in the house plenty of Dr. Moore's medicine to give her; but portions of it were thrown behind the fire to make the doctor believe that deceased had taken it. This was done under the direction of the husband, who said that his wife should have no more of it. On Thursday, Mrs. Brockies administered the medicine. On Friday deceased was sensible, and witness asked her if she wanted anything. She whispered "drink," and by Brockies' order witness gave her some of the medicine. On Saturday morning deceased again became insensible, and remained so till she died. Medicine could not be got into her during that time. She was "very heavily convulsed" at the time of her death. Dr. Moore attended twice a day during the time witness was with deceased. On Thursday the husband went to Dr. Moore's and got a bottle of medicine, which he threw behind the fire on his arrival at home. In the presence of witness, Mrs. Brockies said she would not make any charge, whether the deceased died or recovered. On Friday Dr. Moore and Superintendent Waters came to the house and told her (witness) not to administer any medicine but that sent by Dr. Moore; and the husband, when he came in, told her that she was *not* to give deceased any more of Dr. Moore's medicine. Mrs. Brockies afterwards came in, and said that, if witness was afraid to give deceased the medicine, she would do it herself; and said that, if witness would administer it, she would stand between her and all danger. De-

ceased had only one tablespoonful more after that time. Deceased was lying in the same clothes that she had been confined in a week previously.

Mary Ann Hadenby was in the room when Drs. Moore and Stamp came in, and Mrs. Brockies got into the closet. The doctors took away a bottle of medicine with them, and promised to send some more. Mrs. Brockies, after they were gone, came out of the closet and said that "it was only poison they were going to send her, and if she took it she would sleep herself to death; they did'nt understand her case."

James Waters, superintendent of police, produced the bottle (a three-gill one) which was taken to the police-station by Mr. Spence. On Sunday he found the second bottle, the same size, in a closet in the room where deceased was lying. Mrs. Brockies was present at the time, and claimed it as hers, and wished to have it sealed. He took it to her house, and permitted her to seal it. He asked her the name of the medicine, and she got her husband to write a prescription (produced) from what she said was Dr. COFFIN's book. They both stated that the contents of the bottle were composed of the following prescription:—Centaury, barberry bark, ground ivy, agrimony, rose-leaves, each half ounce. Steep in three quarts of water, strain it, add, whilst hot, four teaspoonfuls of cayenne, and half-an-ounce of gum myrrh.

At this stage of the inquiry it was deemed necessary to have a *post-mortem* examination of the body, and Dr. Edger was appointed to perform that duty, the inquiry being postponed till Wednesday.

The inquest was resumed on Wednesday afternoon, when Dr. Moore gave his evidence as to the result of the *post-mortem* examination. From the symptoms observed, his opinion was that the deceased had died from anæmia, consequent on loss of blood after her confinement, and that death was accelerated by the presence of a clot of blood, causing pressure on the brain, thereby preventing it from properly performing its functions. Lack of proper medicines, also, in his opinion, hastened the death. The clot of blood might have been present before confinement, or afterwards, and he thought it had arisen from natural causes. He had examined the contents of the bottles given to the deceased by Mrs. Brockies, and found in them nothing injurious. They were simply useless in such a case. The jury returned the following verdict:—"The deceased died from anæmia, but we are of opinion that the evidence does not sufficiently prove that death has been accelerated by the medicines which Mrs. Brockies has insisted upon administering." The husband of the deceased was then called before the jury, and received a severe reprimand from the coroner for the palpable neglect of his wife, and supplying her with other medicine while she was attended by a qualified medical man. Mrs. Brockies was also called upon, and desired by the coroner to desist from following the practice of administering medicine, and to induce her husband to do the same. Mrs. Brockies: "I never will give it up." The coroner: "Then I suppose you mean to tell us you will continue to persist in your present course of conduct, and to have the medicines of regular medical men thrown aside to make place for yours?"—"I never do so unless a person wishes to have mine instead." Coroner: "I caution you, in the presence of this jury, and if a death happens in your hands, it shall be most narrowly investigated, and then we shall perhaps see whether you are stronger than law or not."

TO THE EDITOR OF THE HARTLEPOOL FREE PRESS.

Sir—You will oblige me by inserting in your journal the following particulars of the case of Martha Holloway, who died on Sunday morning last, over whom an inquest was held on Monday and adjourned till Wednesday, in order to have a *post-mortem* examination of the body, which was held on Tuesday, at which the doctors came to the conclusion that death had been caused by anæmia. The coroner asked Dr. Moore to explain the meaning of anæmia, and he certified it to be weakness caused by the loss of blood. The Coffinites not been satisfied of my not being called to give evidence, I wish to insert the following, so that the public may have an opportunity of seeing both sides of the case, as it seems

to have caused an excitement. "On Monday evening, May 12th, James Holloway came to my shop and requested me to go and see his wife, as he believed she was dying. I immediately followed him, and found the poor woman in a wretched condition, and to all appearances dying. I asked him what doctor was attending her, and he told me Dr. Moore, but that he had given her up, and could do no more for her; I told him to go for him again and insist upon his coming, which he did, accompanied by Dr. Stamp, when I slipped into the closet, for I knew they would not give her up if they saw me. I heard them say there was still little hopes of her, and Dr. Moore said he would make the bottle a little stronger of antimony. When they dispersed, the husband asked me what I thought—might he go for the bottle? I answered, By all means, when he hastened for it, and was not long before he returned with the bottle, when he asked me if I would give it to her. I told him I would not, as I never administered drugs, neither did I intend. A washerwoman took it out of his hand and gave her two large tablespoonfuls. I told them if they administered the bottle according to the label thereon, she would be dead before the morning. I did not see them give her any more, as I bid them good night and left the house. I saw her no more till the next day about half-past eleven o'clock in the morning, when Mr. Holloway came to my shop and begged of me, for God's sake, to make haste, as his wife was dying. I hastened down at his request, and found her lying on the floor, with not enough straw to cover the boards under her. They told me she was dead up to the knees, which I felt and found correct. She was foaming at the mouth. I cleared it away with a handkerchief, and told them that was all I could do for her, but they might place a bottle of hot water to her feet. I then left them, but returned in the evening at seven o'clock, when I found the poor woman still alive. I felt her feet and legs, and to my great surprise they were quite warm. I said there was still hopes of her recovery, and asked the husband if the doctor had given her up; he said yes, he could do no more for her. I then gave him a shilling to purchase some straw to lay under her, which he did; I then made a bed of the straw, and with the assistance of her husband and two women we lifted her upon it; when she was laid I placed a bottle of hot water to her feet. She was still insensible. I told the husband I would make some medicine for her if he thought proper; he expressed a desire that I should, and I immediately made it and tried to get a little into her mouth, but her teeth being clenched, I only got a small quantity through them, which acted like a charm, for she soon opened her mouth a little and let me give her more. I then left her and returned the next morning, when I found her a little better, for she had taken some sago. I told them they were not to administer the doctor's medicine with mine, and I gave her an injection, when she opened her eyes; at which the nurse seemed quite surprised. I saw her again at night, she was in a glow of heat and perspiration. I called again the next morning, and they told me she had had a very good night, and had taken some food. I told them I was of opinion she would recover, and Dr. Moore and Dr. Edger's assistant also told them that she was out of danger, and that they were to be sure and give Dr. Moore's medicine regular, as it was "sure to cure her." I smiled and left the room, and returned again in the evening, when I found her still better and with every good symptom of recovery, but very weak. I did not see her till 12 o'clock on Friday, being detained at a labour. She was fretting. I asked the cause, and they told me the doctor and a policeman had been there and taken away a bottle of medicine which I gave her, and told the nurse if she administered any person's medicine but Dr. Moore's, they would transport her; which gave the nurse such a fright that she still labours from the effects. I told the poor woman not to fret, and that I would make her up some more medicine. The nurse told me she "dursn't give it, for they had frightened her out of her wits;" I told her I would stand between her and all dangers. I asked if she had had anything to eat, and they told me she had taken a little sago just before the doctor and policeman came, but they could not get her to take anything after. I asked them to give me something, and

I would try her. On doing so, she took a little, and I returned home to make some more medicine up for her. In the meantime, Mr. Spence called at my shop, and asked my husband if I was administering to Mrs. Halloway, and told him he took his wife to be a wiser woman? My husband, asking him his reason for so thinking, he said, "Are you not aware of what penalty she is under by administering medicine to a patient that the parish doctors were attending, and that, if anything happened, they could transport her?" My husband smiled, and told him he was not aware of that, and thanked him for the information. Mr. Spence then said, "If she administers another bottle to her, there will be a warrant issued immediately." My husband told him, that, if the man thought proper to have his medicine, he would send him it. Mr. Spence then went to deceased's house and demanded the bottle. The husband being from home, it was given to him; but as soon as he returned, he came to my shop and ordered another bottle, which I immediately gave him; and he told me he dursn't administer any more of Dr. Moore's medicine, as she grew worse while she was taking it. I called on her on Saturday morning, and found her worse, when I administered an injection. Shortly after Dr. Moore came in, and inquired if she had had a passage through. I told him no, but that I had just administered an injection, which he confessed was necessary; at noon the husband came again, and said she was getting worse. I went to her; she was fretting very much, but quite sensible. I visited her again in the evening, and found her in a similar state; they told me she could not swallow. I got some Arabica food, which I bought for her the day previous, and she took several teaspoonfuls from me, seeming to deny any one else. At this time her poor baby cried, and she, making a great noise, and signing with her hands for the child, I handed it to her; and seemly being quite reconciled, I left her, and went home. On the Sunday morning I returned again, and found her dead: I perceived she had died from strong convulsions. Dr. Moore came in while I was there, and, after asking a few simple questions, he left the house. A few minutes previous to this, Superintendent Waters walked in, and asked if any of that woman's medicine was in the house. I told him yes, and that he could have it when I sealed it up, if he would accompany me, which he did, and, on entering the house, I sealed it, and gave it to him. He asked my husband for a recipe of the prescription, and accordingly he gave it to him, being in the following manner: centaury, barberry bark, ground ivy, agrimony, and raspberry leaves, each half-an-ounce; steep in three quarts of water, strain it, add, whilst hot, a quarter of a teaspoonful of cayenne pepper, and half-an-ounce of gum myrrh.

I am, sir, your obedient servant,

J. Brockies.

Northgate, May 22, 1856.

TO DR. A. I. COFFIN.

The following is the correct statement of James Holloway, the husband of Mary Holloway, the deceased, who died on Sunday morning, at half-past three o'clock in the morning of the 18th of last month, being under our treatment, to which I call your attention:—

On Friday, May 9, I went to Dr. Moore and asked him to come and see my wife, which he refused to do, saying, "I had not the means to pay him." I then went to Mr. Spence, the relieving officer of the parish; he gave me a note to go back to Dr. Moore, the parish doctor. When the doctor came with me to see my wife, he said, "he did not see much she ailed; all she wanted was support." He then told me to go in an hour's time for a bottle of medicine, which I did, and administered it that night. After that, she grew insensible. On Sunday I went again, and he told me he could do no more for my wife. On Monday evening I went for Mrs. Brockies, and asked her to come and see my wife, as I believed she was dying, which she did, when she asked me, "What doctor was attending her?" I told her Dr. Moore, but that he had given her up, when she told me to go again, and to insist on his coming again. I went to Dr. Moore's shop, when he told me he would fetch another doctor to come with him. When he came, accompanied by Dr. Stamp, they said there was still little hopes of her, but Dr. Moore said he would

take the bottle and make it a little stronger of antimony. When they left, they told me to go for the bottle. When they left the room, I asked Mrs. Brockies what she thought, whether I might go for the bottle, and she told me, "By all means." I returned with the bottle, and a young woman gave her two tablespoonfuls, and she began foaming at the mouth. I went for Mrs. Brockies at half-past eleven the next day, and begged her to come down and see my wife, as *it was a case with her*, as she was cold up to the knees, when she told us to place a bottle of hot water to her feet. She returned the same day, and told me there was hope of her, and gave me a shilling to get some straw to lay under my wife. She then made my wife a bed of the straw; I, with two women, lifted her on it. A bottle of hot water was put to her feet, when Mrs. Brockies told me she would make up a bottle for her, if I chose. I told her I wished she would, which she did. My wife looked up. After that, she told us to administer none of the doctor's medicine with hers. Mrs. Brockies gave her an injection, when I told them not to administer any more of the doctor's medicine, but to throw it behind the fire. On Friday I went for some chaff to Hart, four miles from Hartlepool; when I returned, they told me that the doctor, with Waters, the head constable, had been, and took the bottles, and told her if she administered any other medicine but Dr. Moore's they would transport her and me. They told me that Spence had been in the same manner after Mrs. Brockies had brought another bottle, and took it away with him, using the same language. I went to Mrs. Brockies' in the evening for another bottle, and told her I thought my wife was worse, and asked her what she thought, telling her I dare not give any more of Dr. Moore's medicine. On Saturday, at noon, I went to Mrs. Brockies' again, and told her my wife was getting still worse. She came and told me she was fretting. On Sunday morning she died, and Dr. Moore called to see her, not long before he had sent Waters, the constable, to ask if the woman's medicine was there.

This is the full statement the man has given in to me, signed by my hand this 26th day of May, 1856. Hoping you will publish it with Mrs. Brockies' statement, which you will find just as she has given it into me, which is in the *Hartlepool Free Press*, being an advertisement put in by me, as they did not hear her statement, I remain, Sir, your obedient servant, THOMAS BROCKIES.

Northgate-street, Hartlepool,
May 26, 1856.

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 44.)

COLIN went to chapel the following Sunday night, to hear the Antinomians. When he got there, he saw ten or twelve of his drunken associates, who laughed as the preacher took Colin by the hand and led him into the desk to give out the hymn. All went on well enough, until the preacher began his sermon. He told his hearers that John Wesley was now burning in hell, and all them that had believed in his doctrine and were dead were now with him in the flaming blue pit. He then descanted upon economy, and told them that one egg in a pudding was plenty, two were more than sufficient, three were extravagant, four were abomination, and five were d—nation. Colin looked up and told him, in the midst of his discourse, that he ought to be dragged from the pulpit, for desecrating not only that sanctuary by such language, but blaspheming God and his holy sabbath, and ridiculing his servants. This was an opening for Colin's associates to begin an affray which was likely to cost Colin and his crew their liberty, as the sequel will show. These drunken men got up, cut the rope that suspended the chandelier, blew out the lights, and seven of them assaulted the preacher with blows. Each of them had got black eyes, and two of them had their coats torn from off their backs. The police was called in to quell the riot. Each man got home, and thought no more about it, but passed it off as a spree; but on the Saturday following, as Colin was at his work, the High Constable came to him, and told him that he had a warrant for him, and he must come along with him to prison for interrupting a congregation

while worshipping God in a chapel duly authorised by law, and there were other ten with him; that six of them were in jail, and the others would soon be there with him, and he was their ringleader. Colin asked the constable what punishment *he* would be likely to get, and the *others* whose names were on the warrant. The constable told him, if the mayor committed them to the quarter sessions, and the preacher followed up the law, as he had told him (the constable) he was determined to do, it would cost them all that they were worth—their punishment would be transportation. Colin began to tremble, and to wish that he had been far enough away from Gloucester. Colin's master became bail for his appearance on the Monday, and he was saved from being put into prison with the others. On the Sunday he had made up his mind to run away from the place, but his master had his eye upon him all that day, and the city police was told to see that he did not go out of the city. His intention was to start at night when it was dark, but before night he was taken up to bed, as drunk as usual. When he awoke in the morning, and collected his thoughts, the horrors appeared to him in a new form: he thought that he was tried at the sessions, found guilty, and was to be transported: his mind was in a dreadful state that morning. His master called upon him, and said he wanted to speak with him privately. Colin went out with him. His master told him that he had made it his business to see the mayor, and speak with him upon the subject, and to represent it in the true light. He desired Colin to tell nothing but the truth before the mayor, whose name was Bowers, a master currier, and an intimate acquaintance of his master. He entreated him not to get drunk before he went to the hall, and to make himself more easy, as they would all get out of it. This raised Colin's spirits, and he felt better; he went and gave himself up to the constable. They were all called into the justice-room together—Colin's name was first on the warrant, and he was therefore called first. The preacher swore against them all—how Colin had interrupted the preacher (who was a man of the name of Bliss, from Cheltenham), and that the others had put out the lights, and had assaulted one another with blows, and had torn the clothes from their backs. They had no witnesses but themselves and their ragged and torn garments. The mayor asked the defendants if Colin should speak for them all. They said, "Yes." He related what Parson Bliss had said at the commencement of his discourse concerning Mr. John Wesley and his followers, and about the economy of the eggs in the pudding. A gentleman came into the room, when the mayor told both parties to go into an adjoining room and try and settle it, and if not, to come in to him again, and he should settle it. The preacher would not make it up under the following terms:—that Colin and his gang (as he styled them) should each pay ten pounds to their fund, make an apology, the said apology to be inserted in the *Gloucester Journal*. Colin asked his companions what they had to say to those terms. They said, what he should do in the business that they would stand to. He said that he should not give one farthing to their fund, and as for making an apology, he never would. They were then all called up before the mayor, and he told them that there were now two witnesses in the room that saw part of the assault. These two witnesses were the two policemen, who came in with their lanterns, when the chapel was all in darkness; they swore that by their lights they saw two of the preachers knocking one another about with their fists. The mayor ordered all the defendants to be discharged, and the parsons had all the expenses to pay, which was upwards of ten pounds. The mayor likewise told them that he should put a stop to such disgraceful conduct as had been carried on in that chapel lately, and that he should get the license cancelled, and endeavour, while he was mayor of the city, to put a stop to all such doctrine for the future. Thus ended the chapel-going adventure.

Colin's appetite for drink was in no degree abated, after all that he had suffered by it. About this time, he and two of his shopmates were drinking for a fortnight, and after spending all the money they had, each of them pawned what clothes they had got: Colin had to pawn

his, which his employer had bought for him, and had lately given him money to get them out of the "two to one shop;" this raised them about thirty shillings each, which served them only two days more—they were then "hard up again," as they termed it. It was then agreed by all the three to sell the duplicates of the clothes for what they could get for them, which Colin and another did. The third man was too wise for such folly—he absconded, and left the town, got work in Worcester, redeemed his clothes, and is now a consistent teetotaler. I never heard whether he drank any more after leaving Gloucester, or not. He is now at work in Birmingham, and enrolled in the Coldstream Battalion. Colin and companion got for what duplicates they had, about five and twenty shillings, which were soon gone: they had run their credit out at every house which they were acquainted with: then, as they said, they were brought to a dead stand, they found it impossible to get one pint of ale more. Colin used to say, "necessity is the mother of invention," and he made it appear so, in the following artful, but disgraceful, contrivance to raise money. He went into one of the beggar-maker's shops—a beershop which he used sometimes to frequent—and asked for two or three old newspapers, and neatly folded them up, with a sheet of brown paper; he then sealed the parcel with red wax, and directed it to himself, to the care of his employer, with the amount, 4s. 9d., marked upon it as the charge of carriage from Edinburgh. He employed a boy he could trust, to take it to the factory, and inquire for Colin, and to say that he was not to leave the parcel without the money. His master took the parcel into the counting-house, and gave the boy the 4s. 9d., which he brought to Colin; and as a reward for the boy's cleverness, he treated him with beer until he got so drunk that he could not stand. Colin's employer sent for him the next morning, saying that he had something to give him: Colin came; his master told him that he had got a parcel for him, he thought it was from Edinburgh, as the charge upon it was 4s. 9d. Colin told him that he had got no money, and that he should not take it in; but, says his master, "I have taken it in, and paid for it." Colin did not say much at the time; trade was very dead, and Mr. Slatter did not care about the men taking a week or a fortnight's holiday, so as they did not leave him, as trade was expected to revive. Colin solicited the loan of two pounds, which his master gave him without hesitation: he went and cleared off as much of his debts as he could; the following week he went to work, and as some good orders had come in, he had made a good week's work. On the pay-night his master asked him if he would then have the parcel, and pay for it. Colin confessed all to him, and gave him back the 4s. 9d.; he told him how it originated, and that it was on account of his appetite for strong drink that he did it. His master was so pleased with his candid confession, that he gave him a shilling to drink. Colin's drunkenness was past its awful climax, and he was now beginning to see the folly of giving way to his sinful desires after strong drink; and he formed a resolution in his own strength, that he would just drink four quarts per day, and no more, and this was to be *his* moderation. He tried it for near a week, and then he thought he could stand secure within the bounds of moderation; but, alas! for human nature, how weak are man's resolutions, when made in dependence on his own strength! Colin was led home from the factory by two or three men, so drunk that he could not stand, and that, too, before the week was finished. He would not sign the teetotal pledge, because the men would laugh at him. If Mr. Bowly had known what a conflict was passing in Colin's breast at that time, he would have followed poor Colin until he had got him to sign; but as well in his providence as in his grace,

> "God moves in a mysterious way,
> His wonders to perform,"

and this Colin knew to be true. He still lodged at the beershop, and he began to reflect and examine himself by his Bible, or rather the Bible belonging to the house, as he had none of his own. He would often slip away from the company, and get up to his bedroom, and there open the good book; at last his landlady, noticing that he did not seem as he used to be, got one of her children to watch him, and he was caught reading the Bible;

and that Bible, which had lain on a chest of drawers for fourteen or fifteen years, was now not to be seen. Colin made inquiry after it, and was told that it was locked up, and was not to be used by the lodgers. At this time his employer failed in business, and had to discharge his men. Colin wrote to C. & J. Clark, rug-manufacturers, at Street, in Somersetshire, soliciting employment at their factory. Before he had received an answer from that firm, he had a letter from a Mr. Walker, at Stockport; Mr. Slatter, Colin's master, strongly urged him not to go to Street, as the Messrs. Clark were rigid teetotalers, and should he go to them, he would not live three months: as he had always been used to drink, total abstinence would be almost instant death. He was, however, determined to try the principle for himself, and no persuasion of Mr. Slatter's could turn his thoughts from becoming a teetotaler; he told his master, that if he died, he should occupy a drunkard's grave. At this time, an answer to Colin's letter came from C. & J. Clark, telling him, that if his master would give him a character which was in any way satisfactory, he might come on trial for two months. Colin showed the letter to his master; when Mr. S. had read it, he asked him what sort of a character he should send: should he tell him that he was the greatest drunkard in Gloucester, and his daily allowance was sixteen quarts of best beer, as that was only the truth? Colin replied, that he might tell them so, only adding that he was an honest man, and a good tradesman. But he has found out now that he was neither an honest man nor a good tradesman—he is well assured that it is a moral impossibility for a drunkard to possess two such moral qualities. Colin's master sent a letter to Street, but what he said concerning him he never knew; however, Messrs. Clark sent for him to come, under an obligation not to frequent the public houses, nor have any beer on the premises. Colin started for Street; and as this begins a new era in his life, we will now close, by observing that, until education and serious reflection shall teach a majority of the working men of England to become calm, sober, thinking men, uniting themselves in a temperance league for the emancipation of the drunkard, they will continue to be at the mercy of the mammon-lovers, who thrive by the quantity of liquor that is drunk, and who can look with indifference on the rags that are made by drinking, on the tears of the orphan and the lamentations of the widow.

(To be continued.)

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THE ORGANS OF RESPIRATION AND THEIR FUNCTIONS.

The organs of breathing are common to all animals which have life. These vary, in their formation and action, according to the habits of the creature and the element in which it lives. The fishes mostly breathe through the gills, and these are the chief organs of respiration. But even this race of creatures, so unlike man, indicates a similar action in breathing which corresponds with the action of the human lungs in its regularity and constancy. Birds have altogether a different arrangement of the breathing organs, and, at the same time, admirably adapted to the mode of their existence. Quadrupeds have the organs of respiration bearing a greater resemblance to those of the human type than any others to which we have alluded. Some others have but one ventricle to the heart, while most quadrupeds have, in common with man, two ventricles.

The organs of respiration belonging to man are *the trachea, the bronchi, the lungs, the diaphragm or pleura, the bloodvessels of the lungs, and the muscles of the chest.*

The trachea, or windpipe, is the air-tube which passes down the neck, and is parallel with the gullet, the channel which conveys the food to the stomach. It is usually open; but is closed by a small valve, called the *epiglottis*, during the time we either take liquids or substantial food, so that it is kept for the express purpose of admitting and emitting air to and from the lungs. The trachea is also the principal tube through which the sounds of speech and singing pass. It has direct communication with the lungs; but as soon as it reaches the chest, it branches out to each lung, and the two main tubes ramify into smaller tubes, which are known as

The bronchi.—These bronchial tubes spread and radiate in various directions through the substance of the lungs, and terminate in small, globular cells, which are called *air-vescicles.* Owing to the great delicacy of these tubes, they are frequently affected by any sudden change of atmosphere, so that they are obstructed in their action, and inflammation ensues, which is the disease known by the name of *bronchitis.* We have known some persons who, being ignorant of the human frame, have imagined that every slight hoarseness, affection of the throat, or even swelling in the neck, has been an attack of bronchitis. Inflammation of the epiglottis, or the trachea, is accompanied with the symptoms described, and unless attacked and arrested with skill and efficient medicines, may frequently issue in bronchitis. Inflammatory symptoms about the treachea or windpipe, should never be neglected, since they may be, if not checked in the beginning, the forerunners of the most fatal forms of pneumonia.

The lungs are two large, spongy masses, chiefly composed of small air-vessels, arteries, veins, nerves, and lymphatic glands. They extend on both sides of the human trunk, from the upper part of the clavicle or blade-bone at the back, and the collar-bone in the front, to the fifth rib downwards. These are the great organs of respiration, and all the

other appendages are subservient to their healthy and efficient action. They are protected by a membrane internally, and by a fence of bone externally; the ribs, the sternum, and the blade-bones, making up together an almost impregnable fortification.

THE PLEURA is a serous membrane, or thick skin, which envelopes the lungs, and secretes an amount of unctuous fluid, which serves to prevent any damage from the constant action of the lungs. The constant and uniform movement of the lungs must necessarily occasion friction, were it not prevented by this wise arrangement. Any affection of the pleura causes difficulty in breathing and not unfrequently produces inflammation and congestion of the lungs; because the lubrication which the pleura in its healthy state keeps up, is, in its impaired state, either impeded or entirely withheld. The heart is continually sending through the pulmonic artery fresh supplies of blood, and it may not be difficult to understand, that any part of the apparatus of the lungs being out of order, so as to unfit them to return back the blood with great vigour, those delicate vessels must soon become gorged, and the vital action cease. Hence it not unfrequently happens that pleurisy, under improper medical treatment, is the immediate precursor of death.

THE BLOODVESSELS OF THE LUNGS are divided into arteries and veins. Both classes have their main ducts, and their auxiliary or tributary branches, till their number almost defies calculation. Some of them are so small as to make it difficult to pass an ordinary-sized needle through them, and yet the constant and punctual action of the smallest is essential to a complete healthy respiration. Each contributes its quota of power to help our breathing, and to prepare the blood for its diffusion over the whole frame.

THE MUSCLES OF THE CHEST make a firm and elastic diaphragm, which contracts or dilates, as circumstances may require; sometimes admitting a large current of air, and sometimes compressing the cavity of the chest. The energy of these muscles performs a very important part in promoting the comfort of respiration; while, on the other hand, chronic rheumatism, or any other muscular disease, not unfrequently so affects these muscles, as to diminish the action of the lungs, and impede respiration.

We have, in the short space of this article, endeavoured to give a comprehensive view of a subject on which a thick octavo might be written. We are breathing creatures: the process of respiration is constantly going on, from the time of quickening of the fœtus, in the womb, till the time of death, though there is, it is true, a change in the mode of respiration at the time of our birth: yet respiration is life, and the philosophy of life is but little known.

"Our life contains a thousand springs,
And dies if one be gone:
Strange that a harp of thousand strings
Should keep in tune so long!"

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 60.)

COLIN got to Street; but he was far from being sober. Both his masters happened to be at home when he came. They got a lodging for him at a house where the whole family were consistent total abstainers from all intoxicating beverages. Colin was very meanly clad: he had no other clothes with him but what were on his back. He went into a beer-shop, and had a pint of cider, just before he reached the factory. He inquired of the landlady where the factory was: she was surprised, she said, to find tradesmen going to work for teetotalers. However, she told Colin that they had a back door to their shop, and she would let him in by the sly; but Colin never touched the accursed thing from that day; and not long after, this very house was burnt to the ground. The next morning, he got to work; and as he was to make a great sacrifice, he had counted the cost. He was then forty-five years of age, and for the last thirty years he was a confirmed drunkard. He continued for a week or a fortnight before he signed the pledge, at a lecture, given by Mr. Whittaker, a man whom Colin insulted, while he was giving an address upon the principles of total abstinence, at Gloucester. Colin came openly forward, and avowed that the

principles of teetotalism were good, by subscribing his name to the pledge. In a short time afterwards, the teetotal society got him into their committee, and appointed him their secretary, which he continued to be for upwards of four years.

Colin got himself some new clothes, and looked more respectable, and was indeed respected by the society to which he belonged. Colin had said, when he came to Street, that he was not a married man: this he did, never having heard of his wife since her sister wrote to him that both she and the boy had died of the smallpox. Colin went as a bachelor, but there was a never-erring monitor in his bosom which gave him many a severe twinge. He used to attend regularly at a dissenting meeting-house on the Sabbath-day, and there he got acquainted with a single woman of good character and respectability, with whom he kept company for upwards of two years. He told this woman that he once had a wife and child, but they had been dead sixteen years. The woman did not seem to regard it much, as the law, she thought, would not be enforced, even if his wife were alive. It was more than sixteen years since he had heard of her, and her sister's two letters testified of her death; but still there was a something that forbade him making her an offer—but that we must leave for a while, and go back to his teetotalism. After he had signed the pledge, he found that there was a craving for what he had given up, and pledged himself to refrain from. This longing after liquor continued for three or four months, but it gradually decreased, and in eight months he saw that his old master was a false prophet, who had ventured to foretel that he would never keep his pledge, or if he did, it would be the death of him.

When Colin gave up the drinking and adopted the teetotal system, he began to consider in good earnest what he had so wilfully neglected in his youth, and that if he should be taken sick, what would become of him, even in a temporal point of view. He had no relations in England, that he then knew of: there was no prospect before him but that of ending his days in a union workhouse. He now made it his study to implore a Throne of Grace for divine direction in everything; and he can say, with the Psalmist, that God heard him and delivered him out of all his troubles. As he was in no sick-club, he entered into a Rechabite society. Had he been a month or two older, he would have been rejected: however, he was accepted, and by paying sixpence per week, or six shillings and sixpence per quarter, he became entitled to fifteen shillings per week in sickness. Should it continue more than a year, then seven shillings and sixpence per week as long as he lived; should he live to the age of sixty-five, he would receive what is called the superannuation money, which is seven shillings and sixpence a week, without being restricted from work. It will be seen, in the sequel of this narrative, the benefit which he received from this society during a long sickness. He insured himself in the Temperance Provident Assurance Society, for £100, to be paid to him at the age of 65, and the premium cease; in case of death, the £100 to be paid as his will might direct. The expense of paying both to the Rechabite club and to the assurance society, is not so much as it would take to purchase a pint of beer and a pennyworth of tobacco every day. Who would not forego the little sip and the nasty fumes of the poisonous weed, for the ease and comfort of old age, and for support in the time of sickness. The once poor, destitute Colin, without money and without clothes, rejoiced that he was independent of the parish, and had no dread of a union workhouse; and so could most poor men, if they would leave off the use of intoxicating liquors. It was, indeed, almost the eleventh hour when he left off what had been such a curse to him, and by the mercy of God he has provided for himself in case of sickness or old age, and with something to leave at his death. He still paid some attentions to the respectable woman mentioned before, and that affair was now coming to a crisis. She was beginning to be serious with him about housekeeping and furniture, and other things relative to marriage. Colin was greatly agitated at this discourse; he was determined to act honourably, but in which way he did not know, though he

had heard, by tramps and travellers, that his wife was alive. He knew it was no use writing, as he was sure to have no answer, or his letters returned unopened; for nearly three months he was greatly troubled. He at last thought, that if he were to open his mind freely to his employers, and tell them candidly the whole truth, his mind might then be at ease: he tried several times to do so, but his courage failed. At last the time came when he must either give the *yes* or the *no* to this woman, and as he had a great regard for her, he felt a painful struggle in his mind, not being fully certain as to his own situation, whether he was or not a married man. At last he went to Mr. J. Clark, and laid the whole case before him, and earnestly solicited his advice how to act for the best in this affair. Mr. Clark was surprised when he heard his tale, and advised him to write off immediately to the place where he thought she would be, if she were alive, and to write to the secretary of the Total Abstinence Society. It was agreed that he was not to give any answer to the woman until he had heard from the teetotal secretary of the Hitchin Temperance Society, for it was there his wife's relations resided. He received an answer in two or three days, from the Secretary, one of the Society of Friends, and who was his employer when he married his wife. His letter did not give much satisfaction, as Mr. Whiting said he did not know what had become of her; he had heard, a long time back, that she was very ill, but he would make every inquiry about her, and would let him know if she was alive, and where she was; Colin all the while waiting in great suspense the result of these inquiries after his lost wife. At last the letter came; Mr. Whiting had found her out, and she was then in the last stage of a decline, and the boy, in the army, was then in the East Indies. Colin's employers advised him to send for her; so he wrote her a very affectionate letter, and she answered it with one equally as affectionate, admiring the wisdom of God in all his ways, and telling him that she was so ill she did not think she could come to Street—the journey was too far for her—if he would come as far as London, and meet her there, she would be happy, and feel satisfied; or if he could come to Hitchin, her father and mother were dead, and her two sisters, so that he had no occasion to dread an interview with them. Colin thought she might have received parish relief, and he was therefore afraid of the parish authorities; however, Colin, by the advice of his employers, wrote to her, saying that he could come to London, and meet her, and from thence bring her to Bridgewater by the train. In reply he received a letter from Mr. Whiting, saying that she was a great deal worse, and not in a state to undertake the journey, but she might be better in a day or two. Colin received a letter from her three days after, saying that she was much better, and that she would go to London, if he would appoint a day, and name the place at which they should meet. Colin informed her of the day he would be in London, and as the Hitchin coach stopped at the Angel Inn, Islington, he would meet her there. From that time, every minute seemed a day, and every day a month, until the day arrived on which he was to start for London. That did at last come, and his employers sent him in their gig to Bridgewater, to take the midnight train to London, where he arrived about six in the morning, and took a cab to the Angel Inn at Islington.

"Great God of providence! thy ways
Are hide from mortal sight,
Wrapt in impenetrable shades,
Or clothed with dazzling light."

Colin had to wait at the inn from eight in the morning to twelve at noon, before the coach from Hitchin arrived, and it is easier to imagine than to describe his mental excitement—he could not rest; his whole frame was agitated, and shook at times, as if he had been struck with palsy. He paced the street for four hours, and looking out most eagerly for the Hitchin coach. There was a young man who was looking for the same coach, to whom Colin stepped up, and inquired if the coach from Hitchin would be long before it arrived. He said it would be an hour, or an hour and a half, before it came in. Colin asked him if he had any friends or relations coming with it: he told him he had an aunt coming from Hitchin. Colin inquired her name: her name, he said, was a

Mrs. C——, who was his father's sister, and that she was coming to meet her husband; that they had never seen each other for twenty-two years—that his father had brought her to Hitchin twenty-two years ago, when her husband was in jail for debt; and that it would be a good thing if he did not meet her. He was not come to the inn yet; and that he should send his aunt again down to Hitchin. Colin asked him how he knew that his aunt's husband was not come. He said he asked if there was a man come from Somersetshire, and they had told him that no one was come to their house: he said he should have known him if he had been there, for he saw him when he kept company with his aunt—he was then between seven and eight years old—and again he saw him about a year afterwards, when his grandmother and father had brought her and her son from London, and sent them to Luton in Bedfordshire, to be out of his way, lest he should come down to Hitchin when he came out of jail. Colin asked if he did come down. He told him he did, and that he came like a roaring lion, and demanded his wife and child, and threatened to burn the place about them, if they were not given up, or he was told where they where; however, he saw it was no use, for they were determined not to let him know where they were; so he lingered for three or four days about the place, and went off, nobody knew where. His aunt and father heard of him some time afterwards, and then they heard that he was dead; and he wished it had been the case, as his father wrote to him, that he would sooner have followed her to the grave than she should have gone to him. Colin asked him why they were so embittered against his aunt's husband. He said that he was a poor, drunken, good-for-nothing man, and that when he was in work in London, he would even take his aunt's clothes, and either sell them or pawn them for drink—yes, and would get up in a morning and carry the poor child's clothes off, and either sell them or pawn them for drink, and still his aunt loved him! She never told his father or grandmother her hardships until she was brought down into the country. Colin was greatly shocked at hearing this character of himself; it sorely grieved him; and he felt the pangs of a guilty conscience; and the pain was not the less, when he was told that his wife, whom he had caused to suffer so much by his drunkenness, still loved him, and into whose presence he was to be ushered within an hour, through the good providence and tender mercies of God, to make reparation for the sins of his youth. He was like Joseph; and could he have commanded the street to be cleared of all the people, he would have done it, to give vent to his feelings in adoring God, for his mercy in sparing him, for having by means of the temperance society arrested him in his drunken career. His wife's nephew had somewhere to go, and said he should be back by the time the coach arrived, and he hoped that the drunken fellow would not be there.

Colin looked upon himself, and could not help contrasting himself with what he was when his wife left him, twenty-two years before: then no man would have given him a shilling for all he had on his back, and yet it was the best and worst he had; but now, the clothes he had on was a new suit of black, which cost upwards of five pounds; a new great coat, nearly four pounds; a new pair of Wellington boots; new hat; black kid gloves; a new watch, which cost five guineas; and a silver guard; and as to his size, he was five score pounds heavier than he was twenty-two years before; so that it was no wonder that the young man could not recognise him.

(To be continued.)

WILD FLOWERS OF THE YEAR.

JUNE.

(Continued from page 24.)

"For who would sing the flowers of June,
Though from gray morn to blazing noon,
From blazing noon to dewy eve,
The chaplet of his song he weave,
Would find his summer daylight fail,
And leave half told the pleasing tale."

THE present month has a different character from that of the last. The flowers are even more numerous, the leaves thicker, the grass and foliage of a deeper green. Spring has quite yielded to summer. Nature, too, wears a calmer and more settled aspect; and, at noontime, on a June day,

the birds sing but little, and few sounds are heard in the wood, save the humming of that busy little chemist, the bee, which is distilling honey from the flowers. And now, on the open land, we see that clear trembling vapour, which the Scripture describes as "the clear heat upon herbs," and which quivers and dances in the sunshine till the eye aches with gazing upon it.

There is no month in the year in which the early morning and evening are more delightful than in this. It is in June that we see the appropriateness of the beautiful simile of the psalmist, when he spoke of the "Hope of Israel:" "He shall be as the light of the morning, when the sun riseth, even a morning without clouds; as the tender grass springing out of the earth by clear shining after rain."—"He shall come down like rain upon the mown grass; as showers that water the earth."

Every part of a rural landscape in June is profuse in leaves and flowers. Even the surface of the stream is covered over with the green leaves of various plants. The white crowfoot still adorns the silver current; the duckweeds *(lemna)*, which consist of thick and succulent green pieces, like leaves—called by botanists *fronds*—and of threads which descend from them, and hang floating in the water, form a thick herbage on the stagnant pool. The ducks and waterfowl, as they glide among it, gather plentiful meals from its juicy substance, and innumerable insects find a covert under it. The lesser species *(lemna minor)* is very common, and has small compact leaves, very thick in their texture, and slightly convex beneath. It grows so rapidly as sometimes to be a troublesome plant in the pond; but it has been discovered that it converts hydrogen gas into air fitted for respiration, and thus renders the exhalation from the stagnant pool less injurious to the neighbourhood. The flowers of the duckweed are so inconspicuous, that few would observe them, and the greater duckweed *(lemna polyrhiza)*, though sometimes covering our ponds with its purple fronds, is not known to flower in Britain.

Several species of the plant called pondweed *(potamogeton)*, are now wearing their green flowers, which rise above the water, while the whole of the foliage is immersed, and floats about on our clear streams, looking as beautiful as the delicate green seaweeds which lie in the ocean. These plants are often very thick in the pools, and, when the current is slow, are sometimes several feet in length; but they grow in the Swiss lakes so much larger and thicker, that they look like large woods under the water, and are frequently twenty fathoms in length. Like other aquatic plants, they shelter many insects, and swans and ducks are very fond of them.

Loudon quotes Professor Martyn's observation on water plants generally, that the "respiration of these truly aquatic vegetables must be different from those which inhale atmospheric air, as the breathing of fishes is from that of birds." "Accordingly," adds this writer, "they are of a different texture, pellucid, like oiled paper, harsh and ribbed, but often very brittle; and their surfaces, like that of aquatic animals, destitute of down, or hair of any kind." This remark applies to those plants which live wholly in the water, and not fully to those which grow to some height above its surface.

Waving its bright yellow petals above the stream, and forming in and around it a thick sedgy mass, with its sword-like leaves, the yellow iris *(iris pseudacorus)* is a beautiful flower in June. It is often called flagsedge, and cornflag, and, in Scotland, is named waterskeggs. The French termed it *la flambe aquatique*. Country people value its long, acrid root as a cure for the toothache. It is also used for dying a black colour, and for making ink, and is dried and ground for snuff. Its juice is made into a cosmetic, and its seeds roasted for coffee. This flower is sometimes found in moist woods.

We have but two wild species of iris, and the other was named on a preceding page. Our common purple iris is the *fleur de luce*, and it derives the name from Louis VII, king of France, who, when setting forth on his crusade to the Holy Land, chose this flower as his heraldic emblem. *Fleur de luce* is merely a corruption of *fleur de Louis*, and it is now more often called *fleur de lis*, or lily flower.

The forget-me-not, or water scorpion-grass *(myosotis palustris)*, is in blossom in June, and continues flowering till

August. Two or three of our wild flowers are occasionally honoured with this sentimental name. In Queen Elizabeth's time, it was often applied to the ground-pine, a small, yellow flower found on sandy banks, or gravelly fields, with its blossoms so hidden among a profusion of leaves, as somewhat to resemble a pine. In our days the germander speedwell is sometimes designated as the forget-me-not; but it is seldom so called by persons well acquainted with flowers, and it probably originates in its being mistaken for the myosotis. Whether the species of myosotis which grows in the fields *(myosotis arvensis)*, the small, brilliant blossom of which looks like a cluster of blue turquoise, or the large kind, which grows on the stream, be the true, olden forget-me-not, may be disputed. Botanists, however, in France, Germany, and England, seem to agree that it is the latter kind. The water scorpion-grass grows plentifully in most country streams. Its long cluster of pinkish-coloured buds, bending nearly into a circular form, before expanding, procured for all the species, their name of scorpion-grass. Our forefathers, acting upon their usual principles of analogies, inferred, from the shape of the young shoots, that it was a remedy against the bites of scorpions; under which name they seem to have included snakes, adders, and various other reptiles. The old legend of the knight who was drowned, while attempting to gather for a lady some of the flowers from a stream in which the current was rapid, and whose dying words are said to have given the name to the flower, must now yield to an apparently more authentic account of its origin. Miss Strickland, in her late work on the Queens of England, has given us a statement of the cause of the name, forget-me-not, scarcely less poetical than that which has, for centuries, been sung by poets of all the lands of Europe. Speaking of Henry of Lancaster, she says, "This royal adventurer—the banished and aspiring Lancaster—appears to have been the person who gave to the *myosotis arvensis*, or forget-me-not, its emblematical and poetical meaning, by uniting it at the period of his exile, on his collar of SS, with the initial letter of his *mot*, or watchword, *souveigne-vous de moy:* thus rendering it the symbol of remembrance, and, like the subsequent fatal roses of York, and Lancaster, and Stuart—the lily of Bourbon, and the violet of Napoleon—an historical flower. Few of those who, at parting, exchange this simple, touching appeal to memory, are aware of the fact, that it was first used as such by a royal Plantagenet prince, who was, perhaps, indebted to the agency of this mystic blossom for the crown of England. It was with his hostess, at that time wife of the Duke of Bretagne, that Henry exchanged this token of goodwill and remembrance."

"Can the rush grow up without mire? can the flag grow without water?" was the question of the patriarch Job; and as, in his day, the rushes and sedges crowded by the edge of the river, so it is now. Their long, thin leaves form islets on the stream, or fringe its border with their greenness; and as a wind sweeps over the current, and ruffles it into waves, we are reminded of the denouncement, made by the prophet, to the wife of the wicked Jeroboam, "The Lord shall smite Israel, as a reed is shaken in the water."

The tall bulrush, or clubrush *(scirpus lacustris)*, is now growing up, and, by the end of the month, bears its brown and fringed head. Its stems are much used for mats and chairs, and are gathered by country people for sale. The spongy stems are also useful to coopers, for filling up the crevices in casks; cottages are often thatched with them; and when pasturage is scarce, they are eaten by cattle. The salt marsh rush *(scirpus maritimus)*, and several other species, flower by the end of May. The roots of the latter kind are eaten in times of scarcity. The *pi-tsi*, or water-chestnut, which the Chinese cultivate in tanks, and value as a dessert, is a species of clubrush. It is dried in the sun, and is eaten either boiled, or uncooked.

In former times, when rushes supplied the place of modern carpets, and when the ground over which the bride walked to the altar was strewed with these leaves, the sweetflag *(acorus calamus)* was much sought for these purposes, and well suited to them, by its fragrant leaf. The custom of strewing floors on festival

days is still retained at Norwich; and the old cathedral is, on certain days, scented with the perfume of the sweet-flag, profusely strewn over its floors. This plant is abundant in the fenny districts of England. The root is—especially when dried—so powerfully aromatic, as that it might be used instead of spice, for dishes. The Turks make a sweetmeat of this root, and think it valuable as a preservative against the plague. The sweetflag root, which is sold by druggists, is imported from the Levant; but our native species is quite as aromatic as that which is brought from afar. It is one of the oldest medicines known, and is much used in the present day. Linnæus says, that it is the only native aromatic plant of northern climates; the hot spices of foreign lands being invariably the product of the plants grown in the hot regions of the world.

The lovely flowering rush *(butomus umbellatus)*, often called water-gladiole, is now in bloom. The old writers termed it "grassie rush;" and one of them says, "It is of all others the fairest and most pleasant to behold, and serveth very well for the decking and trimming-up of houses, because of the beautie and braverie thereof." Its flowers grow in a cluster at the summit of its stem, and are of a delicate rose-colour, tinged with purple. The sharp edges of the leaves cut like a razor, and often wound the mouths of cattle.

That beautiful aquatic flower, the water-violet, or featherfoil *(hottonia palustris)*, is a great ornament to streams, but it is, in some counties, very rare. Its white, thread-like roots sink deep in the soil, at the bottom of the pond, and its leaves are all under water. The flowers rise above the stream, and seem to rest on its surface; and their handsome clusters are either of a pale lilac or white colour. It affords a covert to several small shell-fish; among others, to the fresh-water periwinkle. It is to be regretted that it is not more general, as it is easily cultivated; for if the seeds be thrown one summer into the stream, the flowers will appear in the ensuing season.

On the marshy sides of the river, grows that very pretty flower, the buck-bean, or bog-bean *(menyanthes trifoliata)*. It may easily be known by its triple leaf, resembling in colour and shape that of the field bean. Its flowers grow in bunches, and are white tipped with red, and most beautifully bordered with a delicate fringe. Its roots are so numerous, and so matted, that on bogs on which this plant grows in plenty, the ground is rendered firm by their interstices. It contains a bitter principle, and is used by the Swedes instead of hops. The roots, when ground to flour, are eaten by the Laplanders, but form a poor food.

But quitting the river-side for the green lanes and fields, we find nature equally profuse. The birdsfoot trefoil *(lotus corniculatus)*, with its pretty yellow papilionaceous blossoms, is scattered over all the mead, scarcely taller than the grass, but not hidden by it. Every hedge is now white with the flowers of the privet *(ligustrum vulgare)*, a plant which is green all the year, and, in winter, is covered with its numerous purple berries, which the birds leave untouched on the trees, and which are used by dyers. The honeysuckle (*caprifolium periclymenum*) mingles its sweet breath with that of the hay-field. On calcareous and limestone soils, the flowers of the wayfaring tree *(viburnum lantana)* are a very conspicuous feature of the hedgerow. This plant is also called the mealy guelder rose, and it is well named, by Mrs. Howitt, the wild hydrangea, for its general appearance is very similar to that of the garden plant. Its young shoots are covered with a cottony down, and its stems and leaves are thick and heavy. Its flat bunches of scarlet berries turn black in drying, and are used for making ink. In the Crimea, the young shoots are valued for the tubes of tobacco pipes; and in Germany, baskets are made of the pliable branches. This beautiful shrub is called, in Kent, the cotton-tree.

The young shoots of the bladder campion *(silene inflata)* peep up on the hedgebank, as early as April, and, in this month, the flower is blooming. The shoots are of a pale green, and have a powerful odour of green peas; and they are sometimes gathered while young, and eaten at table. There is, however, a bitter flavour mingling with the sweet taste,

which renders them less palatable than the green pea; but this flavour is quite removed by blanching. The plant is a common dish in several of the Mediterranean islands, and in Zante it is very general on the table in spring. In the year 1685, the injuries done by the swarms of locusts to the vegetation of the island of Minorca was so great, that the inhabitants were in a melancholy state of destitution, and were saved from starvation, entirely by means of this common wild flower.

The sweet-scented convolvulus *(convolvolus arvensis)* hangs its delicate pink bells on the wheat-stalk, and the large white flowers of the larger bindweed *(calystegia sepium)* are winding among the bushes; and, by their side, sometimes springs the enchanter's nightshade, a plant with small pink flowers and heart-shaped leaves, found chiefly in damp and shady places.

The yellow agrimony *(agrimonia eupatoria)* blows both in June and July. The most frequent places of its growth are field-borders and road-sides. The flower has a sweet scent like that of an apricot, which is stronger when the plant is bruised; and, in early spring, before the appearance of the blossom, the root is also aromatic. Country people make much use of this plant both as an external application and a medicine. It was formerly extensively prescribed by physicians as a tonic, and considered by Dr. Hunter a valuable remedy in disorders of the skin. It is thought by some writers to be the flower called by the ancients, *argemon;* and Pliny says, it takes its name from Eupator, the "finder of it out, and hath a royal and princelie authoritie."

The yellow avens *(geum urbanum)*, though rare in Scotland, is so frequent in rural places in England as to have obtained many familiar names. It is called herb Bennet, star of the earth, goldy flower, and its oldest name was blessed herb. It probably received this because it was once much used by physicians as a febrifuge. Dr. Thornton thought highly of its virtue. It is a pretty flower, growing on a branched stem, and has large leaves at the root. Its root is prized on account of its sweet odour, and, in several parts of England, is collected and laid in drawers and chests, to give its scent to linen. It is also put into wine or ale, to impart to it a spicy flavour, and a water is distilled from it. It is remarkable that when this flower grows in damp places, the root does not possess this peculiar aroma. The water avens *(geum rivale)* is the only other wild species, and is a much larger and thicker plant than this, with its flowers each about the size of a shilling, and of a deep-purplish orange colour.

(To be continued.)

ASYLUMS FOR DRUNKARDS.

It is allowedly the duty of Government to punish for crime, and equally so to put under restraint, those who, from mental derangement, have done injury to others. In the former case the criminal has done a wrong to society for which he is responsible; and he is punished for it in order to work in himself such a state of mind as shall hinder his violation of the laws in future, and have a salutary influence in preventing others from doing as he has done. In the latter, there is no responsibility, and therefore, properly speaking, no crime; and, in consequence, instead of punishment there is merely restraint, so as to save society from any such injury again. But Government proceeds a step farther with those who are in a state of mental derangement, and subjects them to restraint, upon proper evidence of danger to the community from their being left at large.

Again and again the question has been mooted whether drunkards ought to be committed to an asylum—whether those who have friends who are such, should not have the right to obtain from the proper authorities the power of putting them in confinement. It has long been so in Holland. Recently in the Scottish courts it has been decided—in the case of a Mr. Gerrard, a gentleman of independent fortune, who when drunk was furious, and threatened the lives of his relatives—that the sheriff had done right in giving an order for his commitment as a madman. Referring to this case, the publican's friend, the *Scotsman*, argues in favour of the committal, rightly stating, that if the law was what the minority of

the judges held it to be, then Mr. G. was to be let alone till he had killed his wife or some one else; and *after* he had done so, if found insane, to be committed to an asylum, or, if not, to be hanged. While standing up, however, for the prevention of the evil which was likely to occur, rather than waiting till it should happen, the *Scotsman* says, "There is no occasion for resorting to the sophism that the drunkard is a madman. Mr. G., when drunk, is mad. But his case is not a common one, though, unfortunately, it is common enough to produce terrible calamities in society, and to spread fear and misery over a wide circle of innocent relatives and neighbours." This so-called sophism may be found, on right examination, to be no sophism, but fact. Madness does not always shew itself in furiosity; and the man who is in a state of intoxication may be mad, or, for the time, insane, though not furious. If then a person who is drunk be temporarily insane, and if, as the *Scotsman* admits, a man may be a drunkard who is not every day drunk, and a man may be in a state of mental derangement who is not in that condition *every* day, so, if when a man is drunk he is mad, he who is a drunkard may be regarded as a madman; and if the drunkard be a madman, then to the drink he owes his madness. But if he be a madman, the authorities have a right to do with him, on the ground of his madness, what they would not otherwise have a right to do—to put him under restraint.

We are evidently tending towards legislation on this subject which shall issue in asylums for drunkards. To have such asylums would certainly be, to many who are afflicted with intemperate friends, no insignificant boon. But better far withhold the power of making and selling that which makes the madmen; and towards that point in legislation, we have confidence, that though slowly, and through many difficulties, we are surely wending our way.

A drunken man is insane for the time; in ordinary cases the fit leaves him, and, though languid and sad, he regains possession of his lost intellect in a brief space of time. But by persisting in repeated acts of inebriety, many become permanently insane; and many more are on the verge of the precipice over which reason topples and is lost. Impressed with this awful subject, an *inebriate's asylum* has been established for some time in the United States; and the *New York Observer* offers a variety of remarks, suggested by a pamphlet containing addresses on its behalf, from the Rev. Dr. Bellows, Professor Hitchcock, and Dr. Turner. The treatment proposed meets the length and breadth of the evil. It takes in hand the drunkard's body to purge it of its poisonous blood; it takes in hand his mind to purge it of its madness; it takes in hand his moral nature to bring religion to bear on it. Dr. Turner says, that by investigation, almost one-fourth of the young in the city of New York, die under ten years of age, of hereditary inebriety. Statistics show that in ten years in the United States 478,239 inebriates have been consigned to the grave; add to this the deaths of the young from hereditary inebriety, 20,274, and think of the fearful amount. Chronic insanity of inebriety in the insane asylums produces more than one half of the existing constitutional insanity in the United States. Application had already been made for admission into the asylum in favour of 727. Valpeau, of Paris, Wilson, and Wilkinson, of London, and Macgregor, of Edinburgh, have concurred in opinion, that in asylums combining medical, physical, moral, and religious treatment, eighty per cent. of inebriates might be saved. Some months ago this subject was agitated in Scotland, in consequence of a drunken gentleman from Morayshire having been committed to Morningside Asylum, at Edinburgh. And when we consider the dreadful fact, that in London alone, as stated on a late occasion in Birmingham, by G. S. Wright, "900 men, or rather brute savages, were convicted within the last two years, of having beat their wives within an inch of their lives," can we doubt that asylums are needed to reclaim such demons? The subject is well worthy of the most attentive consideration; as we have frequently received letters of inquiry from deeply interested parties, if anything could be done. Our own convictions are strong in favour of such a measure.

MUTILATING A PAUPER'S CORPSE.

EDWARD THOMAS, aged fifty-six, described as a pauper, but who really is a member of the Royal College of Surgeons, was indicted at the Middlesex Sessions, on Tuesday, for having unlawfully mutilated the corpse of George Harding, a pauper, which had been placed in his care for interment. He pleaded guilty. Mr. Poland stated that the prisoner had been an inmate of Clerkenwell Workhouse for some years, and was placed in charge of the deadhouse. The body of a pauper named Harding was entrusted to his care, and it appeared that he removed part of the head and face, and when the circumstances came to the knowledge of the guardians, they at once ordered this prosecution. It was supposed that such parts of the head and face as the prisoner had taken were sold to dentists, who took casts from them for the purpose of exhibiting teeth. The prisoner in mitigation said what he had done was with the view of advancing medical science, and it was such examinations that had brought medical science to the high state of perfection in which it now was. *Post-mortem* examinations were now more frequent than formerly, and the prejudice against them was growing less. He had won honours at the hospitals, but had been very unsuccessful in practice, and was now reduced to the workhouse, but still he was a M.R.C.S. The deceased had suffered from imperfection of speech, and the parts he took away were valuable for ascertaining the cause of it. He denied that he meant to sell the face for his own gain. The counsel said a proper *post-mortem* examination had taken place, and the parts removed were valueless for scientific or anatomical purposes. The prisoner said he was totally ignorant at the time of the legal consequences of what he did. Mr. Pashley adverted to the facts, and said it was of the last importance that persons who became inmates of workhouses should know that they would not only be maintained during life, but decently treated and properly buried after they were dead, and he should pass such a sentence as would show that such cases would meet with severe punishment. He then sentenced the prisoner to eight months' hard labour.

HYDROPHOBIA.

A SHOCKING case of death from hydrophobia has occurred at Abercanaid, South Wales. The sufferer was John Davies, a miner. On the 24th ult., he left for the purpose of going to Merthyr, and on his return his landlady observed that there were marks of blood upon his clothes, and some lacerated wounds upon his hands. She asked him if he had been fighting? to which he replied, "No: I have been bitten by the dog of the iron-bridge. I went to pat him on the head, and he bit me and tore my hand." Some time afterwards he complained of giddiness in the head, and said he was very chilly, and went to bed. Next morning he said he had had a terrible night, and that he could not get a wink of sleep. Subsequently, at intervals, he complained of giddiness, chilliness, and pains in his arms; also of inability to swallow, and a fear of suffocation. He also said he felt as if under water. As he continued to grow worse, some powders were obtained from a surgeon, but, from some silly motive, the parties withheld from the medical man any statement as to the bite of the dog. On Saturday morning he was heard to groan very much, and on being spoken to he said, "Dear me, what a night I have had! I am choking fast. Tell my children, if they want to see me, they must come now, as I am dying fast." Medical aid was called in, and Dr. Russell saw him, as well as Mr. Probert, surgeon, and did all that could be done for his relief. He continued to grow worse, and underwent dreadful suffering, begging his surgeons to let him have fair play. It was observed during the case that if he attempted to speak, or any one ventured to touch him, the paroxysms of the disease would come on. At length he began to foam at the mouth, and his arms and hands to turn black, and he ultimately sank under the violence of the symptoms. The deputy-coroner held an inquest on the body, at the White Hart Inn, Abercanaid, and the jury returned a verdict of "Died from hydrophobia, caused by the bite of a dog."

If an individual will but cultivate self-knowledge, he will find constant occasion of occupation and meditation.

FOOD OF LONDON.

Consumption of Fish in London Annually.—Returns just issued show the last annual sale of fish at Billingsgate-market to be as follows, viz.: Salmon, 2,900 boxes, 7 lbs. in a box; live cod, 400,000, over 10 lbs. each; cod in barrels, 15,000 barrels, 50 fish to a barrel; salt cod, 1,600,000, average 5 lbs. each; haddock, 2,470,000, at 2 lbs. each; smoked haddock, 65,000 barrels, 300 in a barrel; soles, 97,520, at a quarter of a pound each; mackerel, 2,000,000, at 1 lb. each; herrings, 250,000 barrels, at 150 in each barrel; red herrings, 100,000 barrels, at 500 each barrel; bloaters, 265,000 baskets, at 150 per basket; eels, 9,800,000, at 6 ozs. to 1 lb. each; whitings, 17,920,000, at 6 ozs. each; plaice, 36,600,000, at 1 lb. each; turbot, 800,000, at 7 lbs. each; brill and mullet, 1,200,000, at 3 lbs. each; oysters, 500,000,000 pecks, at 400 to the peck; crabs, 600,000; lobsters, 1,200,000; prawns, 12 tons, at 120 to 1 lb.; shrimps, 192,295 gallons, at 320 to the pint. Besides this, it must be taken into consideration, that there is an immense quantity of fish which never enters this market.

How London is Fed.—The sale of country-killed meat at Newgate market has increased so wonderfully within the last few years, that whereas there was only about a dozen salesmen in 1810, the number had increased to 200 by the year 1850. Another curious feature presented by this system is, that carcass-butchers have established themselves at some of the towns in the north, to purchase live stock, slaughter them, cut them into a small number of large pieces, and pack them for transport to Newgate market. Beef is usually sent in quarters, pigs whole, calves and sheep both whole and in quarters. The carcasses are usually packed in cloths, and the quarters in hampers. On the South-eastern Railway the packages average about 100 lbs. each; and this average may perhaps apply in respect to other companies likewise. The Eastern Counties Railway Company has adopted the plan of supplying cloths and hampers to small farmers and graziers, to enable them to compete with men of larger means. There have been many accounts put forth on the quantity of country-killed meat sent to London, and sold at the three markets. Mr. Mayhew, noticing the subject about the year 1849, in the *Morning Chronicle*, stated the quantity of dead meat sold annually at Whitechapel to be about 70,000 stones of beef, 108,000 stones of mutton, 140,000 stones of pork, and 73,000 stones of veal—the stone, in this as in similar cases, being equal to 8 lbs.; the whole amounting, as will be seen, to somewhere about 3,000,000 of lbs. The dead meat sold at Leadenhall at the same time was estimated at about 580,000 stones of beef, 950,000 of mutton, 450,000 of lamb, 540,000 of pork, and 400,000 of veal—making a total of nearly 3,000,000 stones, or 24,000,000 lbs. These numbers do not include 27,400 sucking pigs. It is known that in that year the Eastern Counties Railway brought 600 stones of dead meat to London weekly; while Messrs. Pickford and Messrs. Chaplin and Horne, between them, brought about 14 tons per day from Camden station to Newgate market. The Great Northern brought 17,000 tons of meat and poultry to London in 1854. So extraordinary is the inefficiency of meat at Newgate, compared with the requirements of the market and the market people, that even in 1849, when the trade in country-killed meat was much smaller than it is now, there would sometimes be 25 to 30 Eastern Counties' wagons, and nearly an equal number of Camden-station wagons, arrive with meat cargoes in one morning, although the interior space of the market can only receive six wagons at a time. It was to the year 1850 that Mr. Braithwaite Poole seems to refer, when he states that 67,500 tons of country-killed meat were brought to Newgate and Leadenhall markets alone, of which 20,000 tons were brought by the Eastern Counties Railway. The *Quarterly Reviewer* mentions 37,000 tons as the quantity brought in 1853, by all the railways and the Scotch steamers—an estimate which, in some of its items, is either much too low, or convicts Mr. Poole's of being much too high. Without any more array of figures, it may be well to notice the opinion of an experienced man, concerning the actual value of the meat sold at the principal of these markets. When the Smithfield Commissioners made their inquiry in 1849, Mr. Giblett, a butcher, who ranks among the first in his trade, made the following rough calculation: that the animals slaughtered in London for sale at Newgate market are worth about one million sterling annually; that the country-killed meat sent up to the same market is three times as large in quantity; and that the whole amount of Newgate market sales would thus be nearly four millions sterling annually! The average price assumed by Mr. Giblett was 2s. 10d. per stone; but the commissioners deemed this too low, and thought that the sum total would be higher even than he had placed it.—*The Food of London.*

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PROGRESS OF TRUTH.

There is nothing more striking to the observant reader of history, than the different views he will find to have been entertained in different ages, regarding various customs and practices, more or less prevalent. That which has been highly approved at one period, comes to be not only lightly esteemed, but positively condemned at another. Generally, by slow degrees, and almost imperceptibly, or less frequently by a sudden change, the result of some special cause, public opinion is entirely altered. Many of the questions popular in our day, would have been sneered at and scouted not more than half a century since. It is in the memory of many of our readers, that the idea of slavery being a sin or shame would have been laughed at. Now there is scarcely a man on British soil who will venture to defend it. Such facts are not only striking, but highly instructive: they show us clearly that we ought to beware of condemning any movement, merely because it may not have attained to extensive popularity, or of adhering to any custom merely because it is common and fashionable. Persons, who have, when living, approved of particular customs, would now, if we may judge from their general principles of action, be the very first and foremost in reprobating them. And if we find a few venturing to step out from the common ranks, and to think and act differently—to combat with a custom, and do battle against a practice which they believe to be sinful in itself, or pernicious in its tendency—the consideration of the fact referred to, so strikingly evident in history, should render us careful in coming to the conclusion that they are wrong, and should lead to the inquiry whether they may not be right. Had every one in the past adhered to the beaten track—had there been no divergence and investigation—had every one been contented to think as others had been thinking, and to take for granted everything which had been affirmed or taken for granted—we had been as little advanced as the tribes which roam the forest or scour the desert; had there been none who dared to differ from the general mass, where had been our science or philosophy, our literature, or even religion? We had still been believing the earth to be in the centre of the universe, having the whole heavens revolving round it—we had still been ignorant of the laws of matter or of mind; still at the mercy of the legalised manslayer, who administers poison to cure disease; still in ignorance of the remedies which Medical Botany offers to the sick; and had still been without those treasures of literature which are so abundant and valuable. The minority has not been *always* right, but they have often been so; and in respect to what has been proved to be a good cause, there has frequently been a severe and protracted struggle, by a small minority against a majority so powerful as to be altogether overwhelming, and that would have crushed the effort, but for the living power of truth, and the almighty aid of its great Author.—*Bristol Temperance Herald.*

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Continued from page 65.)

At last the long-looked for coach came in sight, and Colin's heart then beat faster than the horses' feet on the stones. The coach stopped, and he went and asked the coachman if a Mrs. C—— was in the coach; he said she was on the other side. There were some ladies in the coach with her who knew both her and the object of her journey; they said to her, "Hannah, here is your husband!" She looked out at Colin, and told the ladies she was sure that was not her husband, for he was a poor, thin man, &c. Colin went up to the coach-door, and asked if there was one Mrs. C——? "Yes," she replied with a trembling voice; "who wants me?" Colin told her he was her husband. "You are not my husband, sir," she replied. After a little conversation they recognised each other, and as she got out of the coach, she fainted. The kind reader will forgive any omission that the writer has here made on account of its bringing so many painful recollections to his mind; suffice it to say, that they were conducted into the inn, and in a quarter of an hour a hackney coach was called for, and her luggage put into it. They both got in and drove off to the Paddington Station in the hackney coach, as she said they could give vent to their feelings better in a coach than in an omnibus. Colin told his wife what her nephew had said; she replied that she was very glad they had left before he had returned to the inn. Colin did not make himself known to the young man; which was a great satisfaction to his wife, as she wrote to her brother and his son when she arrived at Street, and told them that the good-for-nothing, drunken man—the gentleman dressed in black, who had had such and such conversation with her nephew—was her husband. Colin, at first sight of his wife, could not distinctly recollect her features, as disease and trouble had brought her down to the verge of the grave; and she, on her part, could not recollect his, as total abstinence had made him quite another man. Colin made inquiry about their son. Hannah, for that was his wife's name, told him all that she could about him; she said that her present disease originated from the trouble and anguish of mind that he occasioned when he ran away from his apprenticeship and enlisted for a soldier. She told Colin, that for six weeks she never slept one hour, but wept all night; she said, though she should never live to see him come home, yet she now felt an inward happiness which before she was quite a stranger to, and that was, to find Colin an altered man, both in character and respectability, and she sorely regretted her not coming to him while in Gloucester; but, she said, she could now see the finger of God in all this wonderful providence in bringing them together before that death parted them. Colin and Hannah got into the train at Paddington, and came to Bridgewater the same night. They stopped at Bridgewater all night, and Colin's employers sent a conveyance in the morning, for them to come to Street by ———, at which place they arrived in the evening to a comfortable home, made so by the influence of Colin's employers, who, with their wives, came to see them the following morning, and by whose means, with God's blessing on his total abstinence, they had brought together a man and his wife who had been so long lost to each other. But there was that hectic flush upon his wife's cheek which is a sure sign of a fatal consumption; she was very low-spirited, and every spare moment that Colin had he was found with her. His employers invited her to come into the factory along with the other women to do anything she could; it was not for what she could do that they invited her to the factory, but because she was a stranger, and her husband was working there, and the women she would be with were very respectable professors of religion; they thought it might be the means of cheering her up, which it certainly did for three or four months; but her thoughts now were all about her dear boy who was in the West Indies. However, they got a letter every month from him, and they, in return, wrote to him. Colin sent him a tectotal pledge paper to put his name to it, with serious injunctions to keep sacred and inviolate the righteous pledge—altogether

to abstain from what had been to his father such an awful occasion of vice and misery. He not only signed it, but he also raised a teetotal society in the regiment, which consisted of upwards of 200 members; and he sent his father home their rules, with a card of membership, which his mother saw before she died, and it was a great comfort to her mind on her death-bed. Hannah thought she was getting better as the summer advanced; but, alas! it was a false hope. Colin and she were making plans how they should live, and what they should do for the boy when he came home; but He who says, "My ways are not your ways, neither are my thoughts your thoughts," was frustrating all their earthly plans and worldly schemes by laying his hand upon Hannah, not in anger, but in love. It was the last day of August when she took to her bed, and gradually wasted away without any apparent pain. She was attended daily by a medical gentleman, who told Colin not to be too sanguine in his hopes of her recovery, as he thought the disease was organic. She would by no means allow any of the neighbours to sit up with her; she would have none except Colin to read to her, and wait upon her at night. His employers carried out to the very letter that Christian philanthropy which distinguishes the Society of Friends: there was not a day in which they did not send from their tables something they thought she might enjoy, and they often came to visit her. Their kindness, she told Colin, had produced a regard for the Society of Friends which she never had felt before.

She often said to her husband that she should be in heaven on Christmas day; when her husband thought that she was getting better, she would tell him that it was only a ray of sunshine before the gloom of death. She continued to get weaker every day. About six weeks before her death Colin seriously inquired of her the state of her mind, and if she was prepared for death and eternity; she replied that it would be too hard a work now to seek the salvation of her soul; she had done so while she was in health, and she had now an earnest of what she sought then, and her blissful hope was the Spirit of God, witnessing with her spirit, that it was the atoning blood of Christ that had made her free from the law of sin and death, and she was not afraid to die. She said that her God had pardoned all her guilt, which was the sting of death; therefore she had nothing to fear. God had brought her and her husband together that each of them might see what the Almighty had wrought for them, before death had parted them, and that He had done all things well. She told Colin and also her neighbours, that the only thing that pressed upon her mind was, the thought of leaving her husband after being apart so long, and now that they had renewed their affections for each other. She greatly regretted (she told her neighbours) that she did not come to her husband when he so often sent for her; she said that although he was such a great drunkard, it was her duty, as his wife, to have been with him, and to have meekly advised him for his own good as well as for her own, spreading all her wants and desires before a throne of grace and leaving it to her Heavenly Father to accomplish his mercy. As she drew nearer the verge of the grave, her prospects of the heavenly Canaan became brighter; she told Colin, about a month before she died, that she would not change situation with Queen Victoria. She said, that the mists of this world were all expelled from her soul by the bright rays of the Sun of Righteousness, "who had arisen upon her with healing in his wings." Within a week of her death she seemed a good deal better, and got up to have her bed made; this was the 18th December. She still said she should spend Christmas day in heaven with her Lord. Colin had a girl to wait upon her through the day, while he was at the factory; she even told this girl what to make, and how to make Colin's Christmas dinner, as she should not be in this world then, but at the marriage supper of the Lamb in heaven, where the Lamb, which is in the midst of the throne, would make her a welcome guest, where he would wipe away all tears from her eyes, and tune her heart to sing the song of Moses and of the Lamb. She was taken worse on the night before she died; she was seized with a convulsion fit, but got better towards the

morning. When the day appeared, it was evident that her death was at hand. Colin had never been on the bed for sixteen weeks; but he lay upon two or three chairs by the bedside, so that he might attend upon her; and he had a great deal of conversation with her on the Saturday night about eternity and heaven. On the Sunday morning she was no worse, and would have Colin go to meeting; a woman came in at eight o'clock, and told her that a Mrs. Lewis had just expired. She was one of the Society of Friends, and was very intimate with Hannah. Hannah made a reply, saying, that she had got to heaven twenty-four hours before her. On the night before her death she seemed greatly revived; her bodily sufferings were by no means painful—her soul was serene, and altogether she looked as if she was recovering, which gave Colin a hope that she would yet get better. Colin went to sleep, and slept for nearly two hours. When he awoke, Hannah asked him what the hour was; he told her it was just four o'clock; she replied that she had just four hours more to be with him in this world, although there was no visible change or alteration in her countenance. She continued to talk with him until eight o'clock—while, with her hand in his, she bade him farewell, and closed her eyes in death.

(To be concluded in our next.)

GARDEN FLOWERS OF JUNE.

"The shining pansy, trimmed with golden lace;
The tall-topped lark-heels, feathered thick with flowers;
The woodbine, climbing o'er the door in bowers;
The London tufts of many a mottled hue;
The pale pink pea, and monkshood darkly blue;
The white and purple gillyflowers, that stay
Lingering in blossom summer half away;
The single bloodwalls, of a luscious smell,
Old-fashioned flowers which housewives love so well;
The columbines, stone-blue, or deep night-brown,
Their honeycomb-like blossoms hanging down;
Each cottage garden's fond, adopted child,
Though heaths still claim them, where they yet grow wild;
With marjoram knots, sweetbriar, and ribbon-grass,
And lavender, the choice of every lass."

CLARE.

If from among the many flowers which deck the June garden, we were bid to select one which should seem its peculiar ornament, the mind would involuntarily recur to the rose.

"The roses laden with the breath of June,"

are now found both in the hedgerow of the lane, and in the lowliest and richest garden. They are ever favourite flowers, nor were they less so in the olden time.

Many hundred years have passed since the rose was first the theme of praise; and time, with his many changes, has not deprived the queen of flowers of her pre-eminence. In the east generally, and in Persia especially, it points the moral of the sage, and inspires the song of the minstrel. Not only did Hafiz and Khusroo sing of its beauty and odour, and tell how the nightingale, "the bird of a thousand songs," utters her plaintive lament when it is gathered, but even to the present day, the Persian song would seem incomplete did it make no reference to "the garden of Gul in its bloom."

It would be vain to attempt to enumerate the various roses under culture in our country. More than a hundred distinct species are known, and about two thousand varieties are said to be the objects of care to the British gardener. The rose, in some one or other of its species, is a wild flower in almost every country of the northern hemisphere of the globe—from Sweden to northern Africa, from Kamschatka to Bengal, and from Hudson's bay to the lofty mountains of Mexico: but neither South America nor Australia can boast the rosebush, either on mountain height, or in deepest valley. In the countries at the north of Europe, the flower, in its wild state, is single, like our wilding rose; but in Italy, Spain, and Greece, it is often double.

The two species of rose which were earliest cultivated in the British garden, appear to be the cabbage or Provence rose, and the musk rose. The former *(rosa centifolia)* is well known by its numerous petals, closely folded over each other, like the leaves of a cabbage. Every cottage plot can show a bush of this sweetest of roses. It was long thought to be a native of France; but this seems doubtful. In some low woods on the eastern parts of Caucasus, it is certainly wild, and its odour perfumes the air. Dr. Clarke speaks of its fragrance and

profusion in the isle of Rhodes. Upwards of seventy kinds of this rose only are under culture; and our pretty moss roses, which blush so beautifully from under their verdant, mossy veil, are varieties of the Provence rose. It is remarkable of these flowers, that, when removed to the milder atmosphere of southern Europe, they lose the mossy covering which seems so suited, in our climate, to preserve the delicate young bud from the morning or evening chills. The cabbage rose is planted both in England and France for the sake of its petals, which are gathered, when fully blown, for making rose-water, and also for the conserve of roses, sold by the druggist.

The musk rose *(rosa moschata)* is found wild in the north of Africa, and the warmer portions of Spain. It blooms in autumn, and its musky odour is most powerful in the evening. Its large bunches of flowers would weigh down the slender branches, were they not supported. The kinds of musk rose are not numerous, as there are not above a dozen sorts. This flower is thought to be the rose represented by the Persian poet as the delight of the nightingale of the east, whose songs, sweet though they are to oriental ears, are described by English travellers as far inferior to those of our bird of night.

The French rose *(rosa Gallica)* is also a common flower in our gardens. It has large, open, flat flowers, on stiff stalks. It grows wild in some parts of France, and at Geneva; and is found in Austria and Piedmont. This rose is easily scattered by the winds, and forms a great contrast to the compact, closely-folded cabbage rose. Though wild in France, it is cultivated at the little town of Provins, and also at Fontenay aux Roses, near Paris, for the conserve made of its petals. The York and Lancaster, with its flowers variegated with red and white, is one of the varieties of the French rose. It delighted our forefathers, by blooming at a season when they deemed it an auspicious token that the civil wars should cease, and the union of the two emblematic roses, in the persons of Henry VII and Elizabeth of York, should bring peace and happiness to the long-distracted nation. It is said that the significant colours of red and white, were never, till this period, seen united in the symbolic flower of England, and great crowds went from the city to witness this natural prodigy.

The damask rose too *(rosa Damacena)* is common with us, and if it is not a native of the neighbourhood of Damascus, yet it was planted many centuries since in that ancient city, whose name it bears; and now, both in its red and white varieties, it still decks the gardens there. It appears to be, certainly, wild in some parts of Syria. The Parisians are very fond of this flower, and it is one which is most commonly sold in their flower-markets. The French, indeed, prize the roses generally; and it is an old custom, in some villages of France, to present, on a certain day in every year, a rose to the cottage maiden who is thought, by her conduct, to have merited the esteem of her neighbours, and who for the following year is termed *la rosière.*

Then, too, we have the numerous varieties of the delicate China or monthly rose *(rosa Indica)*, which sometimes half cover the cottage wall, or grace the bush of the town garden. But the dim air of the city is not good for roses, and even these look pale and sickly, if compared to the country flowers, while our yellow roses will not thrive at all near the smoke of a crowded neighbourhood. The most beautiful of this family of roses are the tea-scented or noisette roses. The China rose grows wild about Canton, in China.

The dark, velvet petals of the Bourbon rose *(rosa Bourboniana)* rendered it much admired, and its fragrance is remarkably sweet. We have, too, some pretty roses, with their tiny buds and little sprays of leaves, called the *roses de meaux*, and these are a variety of the cabbage rose. There are, besides, the white Scotch roses, and the maiden's blush roses, and the yellow double and single roses, and that lovely kind of briar rose, called by the Italians *rosa perla*, which blooms all Europe over, and which awakened feelings of deep emotion in Rich, when he saw it flowering wild in Koordistan, just as it did in the hedges whence he had gathered it near his home. But we must pause in the list of the sweetest of flowers, and leave unnoticed

many others, familiar to those who, like Eve, tend the plants, as Milton describes our first mother as doing in earth's fairest garden :—

"Veiled in a cloud of fragrance, where she stood
Half spied, so thick the roses blushing round
About her glowed; oft stooping to support
Each flower of tender stalk, whose head, though gay,
Carnation, purple, azure, or specked with gold,
Hung drooping, unsustained."

The rose is much cultivated both in Egypt and Syria. It is in many parts of the Holy Land found wild in abundance, yet it is not so general as to render it an object of so frequent reference as the myrtle, the palm, and the olive, which are far more widely distributed in that country. There exists, however, a tradition that the name of Syria is a corruption of Suristan, the land of roses, which it was once called, from the profusion of a species of rose termed Suri, that grew in some part of the land.

Very beautiful yellow roses have been found flourishing among the ruins of Baalbec, and the hills which lie on the road from Joppa to Jerusalem, are still gay with the white or pink rose. In the desert of St. John, the gardens of the little village of that name abound with these flowers, and the bushes are described as "forming small forests in the gardens." Burckhardt found roses in plenty among the ruins of Bozra, beyond the River Jordan.

There seems little doubt that the isle of Rhodes derived its name from *Rhodos*, the Greek word for this flower, on account of its lovely roses. Dr. Clarke speaks with delight of the fragrant atmosphere of this island, and says that, in addition to the odours of the rose, every gale is scented with citron and orange trees, and that numberless aromatic herbs exhale at the same time such profuse fragrance, that the whole atmosphere seems to be impregnated with its spicy perfume. The pagan writers said of this island, that Jupiter poured on it a golden shower.

And now, when the sun shines brightly, the eye is absolutely dazzled as it gazes on the glowing flowers of the scarlet lychnis *(lychnis Chalcedonica)*. Pliny observes that this flower was in his time called *flammea*, from its colour, so like to the flame of fire. He speaks of its having been brought from Asia. It appears to have been introduced hither from the Russian gardens, in the year 1596, and it is generally thought to have been sent into Europe from Asia, during the period of the crusades. The large clusters of this brilliant flower, growing on a stem often three feet high, render it a valuable addition to the garden. It blooms also for three or four months. The white and double-flowered varieties are equally handsome, and are much cultivated in Holland, but are not so frequent in our gardens as the common scarlet kind.

Two other very beautiful species of lychnis are not rare. The red flowers of the Chinese lychnis *(lychnis coronata)*, are much valued in China and Japan; and the splendid lychnis *(lychnis fulgens)* is a native of Siberia. Both plants are well worth the care which the gardener must bestow on them during the frost.

Several smaller kinds of border flowers, as the ragged robin, the pink bachelor's button, and others, are species of lychnis; and the flowers termed catchfly are very nearly allied to them. Of these we have a great number in the garden, and several grow wild in our fields. As Dr. Clarke observes, the weeds of one country are the flowers of another; "accordingly," says he, in his account of Sweden, "we found the common poppy and the night-flowering catchfly cultivated with great care, as ornaments of the little garden of the inn where we rested."

More than seventy kinds of catchfly are in British gardens, and they are all more or less covered with a glutinous substance, which, having a sweet taste, is attractive to insects, and prevents their escape from the flower. The old writers called the plant limewort. Lobel's catchfly *(silene armeria)* is common in most gardens, and the clammy species, *silene viscosa*, well deserves its name.

The flowers of the two species of fraxinella shoot up on tall branches, and the leaves, so like those of the young sapling of the ash tree, are very elegant. From this resemblance the flower is termed fraxinella, or little ash. The red species *(dictamnus fraxinella)* has pale pink flowers, marked with purple. These

plants have a number of small, brownish-red glands on the flower-stalks, which exude a viscid juice of a resinous nature. When slightly rubbed, a pleasant odour is diffused, like that of lemon-peel; and if the plant be wounded, the fragrance is much more powerful. The resin from the glands renders the plant very clammy to the touch, and it is also inflammable. It is well known that this plant may be lighted up by the flame of a candle, but it is generally thought that the light can be seen only during darkness. On a fine summer evening in June, before even the twilight had commenced, the writer of these pages once tried the experiment. On holding the light at about half an inch from the flower, the vapour which it emitted took fire, and a beautiful blue flame ran over every part of the plant, which was about three feet high. It occupied about half a minute in its progress, and the strong, balsamic odour which at that time arose from the plant, was almost overpowering, and perfumed the air of the garden for some distance. This same fraxinella bloomed for days and even weeks after, and its pink flowers and feathered foliage seemed as fresh as before the flame had passed over them. Both the red and the white species *(dictamnus albus)* are natives of Germany. The root is used in medicine, and contains a powerful opiate. They are hardy, perennial plants, and will thrive in almost any situation, or on any soil.

Sixty years since, the lovely tribe of fuchsias were unknown in Great Britain, and now they hang their crimson bells in our gardens, or bloom among the flowers which deck the window-sill, smiling even in the dim atmosphere of London, but looking greener and gayer in the little garden-pot of the country cottage parlour. We have now several species, and many others will probably yet be brought from the wild places of Peru and Chili. The most interesting, as well as the earliest introduced, is the scarlet fuchsia *(fuchsia coccinea)*, which is wild in Chili, and was brought into this country and presented to the royal garden at Kew, in 1788; the remaining species of the genus not having been introduced before 1823. This fuchsia was long considered a very delicate plant, and was kept in the greenhouse, and known only to the rich; but it is found to be so hardy as to be now also the poor man's flower. The richly coloured tints of its crimson calyx, and the purple corolla within, rolled up like a ribbon, enable the scarlet fuchsia to vie in beauty even with the brighter scarlet of the splendid fuchsia *(fuchsia fulgens)*, and others recently imported; while it is far superior in beauty to the pale, flesh-coloured and green varieties now cherished by the curious. The slender fuchsia *(fuchsia gracilis)*, which is a crimson and purple flower, is one of the best for the garden bed. It is a handsome, slender shrub, about four feet high; its leaves, like most of the fuchsias, veined with red. This was introduced from Chili, in 1823; and though usually a shrub, may be trained to a single stem. The smaller plant, the globe fuchsia *(fuchsia globosa)*, is also very hardy.

The fuchsias are named after Leonard Fuchs, a well-known German botanist, who published some valuable works in the sixteenth century. Their fruit is a dark berry, which, when ripe, is agreeable to the taste. These plants are often, when in the garden, five feet high; while in the greenhouse, it is no uncommon thing to see them nine or ten feet in height.

The French honeysuckle has long been an ornament to our gardens. Parkinson, who published his "Garden of Fowers," in 1596, calls it the red satin flower, and the red-flowered fitchling; and adds, "some foolishly call it the red or French honeysuckle." The numerous species of hedysarum are all hardy flowers, and one which grows wild in various parts of Asia, the prickly-stemmed species *(hedysarum alhagi)*, is celebrated as being the shrub which produces manna.

A most singular instance of spontaneous motion is exhibited by a species of saintfoin called the moving plant *(hedysarum gyrans)*. This is a handsome flower of a purplish-pink colour. It grows on the banks of the Ganges, and is called by the natives of India, *burram chandali*. No sooner do its young leaves shoot out of the ground than they begin moving up and down; now with sudden jerks, now with a gentle, waving motion.

By day or night, in sun or shower, the plant is never at rest; and if the beholder grasp it with his hand, and compel it to be still for a moment, it is no sooner released than it recommences its action with more rapidity than before, as if trying to regain the time it had lost while under pressure. The leaves are composed of three leaflets. Sometimes one leaflet will wave up and down while the others are motionless, and sometimes the three leaflets move simultaneously; but it has been observed that the whole plant is seldom agitated at one time. This flower is a universal wonder, no botanist being able to account for its voluntary movement. The well-known irritability of the sensitive plant, the Venus's fly-trap, the sun-dew, and others, is caused by the touch, and is considered by botanists as similar to the action of muscular animal fibre, under the influence of galvanism. But this plant needs no approach of external objects to impel its action, nor is it influenced by electricity in the air, or by any perceptible cause. In our hothouses, the plant loses some of its acting power, and has only a faint, tremulous motion. It is also, in India, sometimes nearly quiet during the middle of the day, but its agitation is, in its own climate, generally as unceasing as that of the heaving ocean, or the beating heart.

Many beautiful poppies are expanding their crumpled petals to the sunshine, and though their unpleasing odour renders them little suited for nosegays, yet they are very brilliant additions to the parterre. The brightest of them all is the large scarlet eastern poppy *(papaver orientale)*, which was first found by Tournefort in Armenia, and soon dispersed throughout Europe, by the seeds which he sent to the Garden of Plants at Paris. It is of the most dazzling colour; and on summer evenings bright flashes of light have been seen to emanate from its fire-coloured flowers. The large-bracted poppy *(papaver bracteatum)* is no less splendid a plant, and is now very generally cultivated. It is a native of Siberia.

Some pretty delicate poppies, called carnation poppies, are in flower at the end of the month, and continue blooming till August. So frail are they, that it seems as if a shower or a rude wind would scatter them all away, yet, like the delicate cobweb with which the spider enwreaths the hedges, the light shower of summer only brightens them by its spangles, and the soft winds only ruffle them to display their beauty. Still, however, they are frail flowers, even where all are frail; and a long-continued rain will so beat them down, that they cannot rise after it. Sometimes they are like white gauze; again they glow in brightest scarlet, or deepest crimson; or their white petals are traced with a blush-coloured streak, or edged with a rim of rose-colour. These are all varieties, produced by culture, from the common poppy of our cornfield.

The yellow poppy, often called Norway poppy *(papaver nudicaule)*, with its bright orange-coloured flowers, is very handsome, and has a sweet fragrance. It is a native of Siberia and Russia.

And now the pretty minor convolvulus *(convolvolus tricolor)* is beginning to blow, and its large cups of deep azure will soon cover the branches. This species grows wild in southern Europe, and the blossoms have usually rays of white. Sometimes they are pure white or blue, rayed with yellow in the centre. This flower is not very similar to the climbing plant, called by gardeners the major convolvulus *(ipomœa purpurea)*. This, in its different varieties of purple, white, pink, or lilac, is a beautiful American plant. In its native woods it is very luxuriant, twining so among the branches of the trees, and so mingling itself with its neighbour plants, that the Americans term one species of the flower "busy-body." With us it will sometimes climb ten feet high; but in Jamaica its bells hang from the loftiest trees of the forests. All the species are ornamental. That known by the name of indigo convolvulus *(ipomœa nil)* is of the clearest blue tint. The Italians term it *campana azurea;* and as, unlike the others of the convolvulus tribe, it opens at night, it has also the name, in Italy, of *fior di notte.*

Many species of the ipomœa are to be found in our hothouses, and comparatively few can bear the winter in the garden.

(To be continued.)

THE RIGHT OF GOVERNMENT TO PROHIBIT LIQUOR TRAFFIC.

The right of Government to interdict the sale of intoxicating liquors as a beverage is the right to prevent the undermining of its own foundations—the central right of self-defence and self-existence. Alcoholic liquors, by their pre-eminent malign action upon the brain and mind, tend to disrupt all civil relations. The obedient citizen they transform into a reckless and turbulent violator of law; they are thus the natural enemies of Government, and should be so treated; the inspirers of lawlessness, their own fate should be outlawry. It is no impertinent or offensive interference with private personal concerns to interpose authority, and prevent a man turning himself into a fool, a maniac, or a criminal. The obligations of Government and the individual are reciprocal. Government owes to the individual protection of natural rights; and the individual owes to Government obedience to law. If the individual fail in fulfilling his part of the contract, it is the prerogative of Government to enforce compliance with it. If the citizen indulge in any habit which, in its nature, tends directly to disqualify him for the just discharge of his civil responsibilities, Government has the necessary right of interference to the utmost extent of its power. If the effect of alcohol in the brain be to put a man beside himself, and make him incapable of working out the tasks which belong to his manhood, it is the duty of Government to see to it that he does not alcoholize his brain. If the effects of these liquors be, as science demonstrates, and universal experience verifies, so to poison and pervert the springs of conduct that a thousand forms of evil result; if they weaken those sentiments and faculties by the exercise of which man is elevated, and educate and discipline to a more than natural strength the lower propensities by which he is degraded; if they so bind men in the spell of passion as to paralyse all self-respect and noble exertion; if they change the man of work and thrift to an idler and vagabond; if they consume to ashes and cinders the affection of the husband and father, and scatter widowhood and orphanage right and left through the community; if they lift the floodgates of every form of vice and demoralization, peopling the lunatic asylums with the insane, the alms-houses with vagrants and paupers, filling the prisons with criminals, and causing the gallows to bend with its burden of malefactors; surely they fall within the legitimate scope of legislative management; and, if Government is not a mockery, its control over them must be absolute, and adequate to the demands of the case. Indeed, to remove such obstacles as these to private safety and public prosperity is the very thing that government is for. If its purpose be anything else than to furnish nestling places for mousing demagogues; if it have any other aim than to attend to the collection of money and its disbursement among its own officials; if politics be anything more than a great game to be played at by a few for their own selfish and amibitious ends, and the amusement and excitement of the people; if, on the contrary, government be an instrument for the accomplishment of good beyond itself; if it be an institution endowed with full and responsible power to protect the rights and regulate the relations and promote the welfare of its citizens; if politics be truly the vocation of earnest-minded statesmen, who seek to address themselves manfully to the problem of human improvement—then does the present question, in all its vital bearings, fall within the domain of legislative adjustment.—*The Scientific Basis of Prohibition; by Professor Youmans.*

EYEBRIGHT,

TRANSLATED FROM THE SWEDISH, BY MARY HOWITT.

It was evening; the sinking sun gilded the edges of the broken clouds through which it glanced, and diffused a red light over the landscape, and upon the pale countenance of an old fiddler. He was sitting on a lonely heath, silent, and sunk in deep thought; one hand holding his fiddle, and the other resting caressingly on the head of a dog, which lay beside him with its eye immovably fixed upon its master. A few wretched cottages were scattered about the heath, but not a sound was heard, excepting the occasional bleat of sheep, which were seeking their scanty food among the ling.

A little girl played about near the old man. She was thinking neither of sorrow nor of want, for she was enjoying herself greatly. She picked up sparkling grains of sand, which glittered in the

evening sun; she found the gnaphalium, which was like a little bouquet of everlasting roses; and the little cups of the crimson-tipped cup-moss, which were brimful of the clearest dew. The bread which she ate for her supper was very good; now she ate some herself, now she gave some to the dog; and when she had finished the last morsel, she clapsed her hands, and said a little grace, as was her custom:

"I thank thee, Lord, for bread so sweet!
Bless thou the fields where grows the wheat,
And may each little girl and boy
As good a meal as this enjoy!"

Thus having said, she began to pluck sprigs of blossoming heath, and in so doing found a little flower growing close to the ground which was quite new to her. It had many little stems, like a beautiful branch of light, and a number of little white blossoms, which were tinted inside with lilac and yellow very beautifully, and which gave them the appearance of a kindly glancing eye.

I have said that golden-tinted clouds gathered round the sunset; behind and concealed by one of these, stood the guardian angel of the district, and gazed below with sorrowful glances. He gazed sorrowfully upon the cottages which were scattered on the heath, and on the rude human beings who inhabited them. No pious evening prayer arose with the smoke towards heaven; no grateful tear fell with the dew upon the earth; everything upon the earth was desolate and joyless. No, not everything! The glance of the angel fell upon the playful child; he beheld within her soul the pure gold of affection, and as she gathered the little white flower he whispered, "Eyebright!"

"Eyebright!" repeated the little girl also in a whisper, like an echo of the heavenly voice; and she kissed the lovely, delicate flower. But she did not, at that time, know how well it deserved the name.

"Look, grandfather!" said she, presenting the flower to the old man, at the moment forgetting his blindness. He started, as if awaking from a dream, laid his hand upon his inflamed and darkened eyes, while a tear fell from them upon the cup of the flower.

"I cannot see it at all!" said he, and then again sank into gloomy thoughts.

The little girl was distressed, for she thought that he was grieving because he could no longer behold the beautiful setting sun, nor yet a little flower. She had reminded him of his blindness, and she was so sorry that she had no longer any heart to play.

"Oh, if he could only see!" thought she; and with a deep sigh, laid her bright, curling locks upon the dog, and threw her arm around his neck. He licked the little hand quietly, and heaved a great sigh in his own way; after which the two fell fast asleep. The guardian angel floated invisibly around them, and gazed upon them with loving, happy glances. As she slept, the little girl dreamt that she beheld her mother, wrapped in a snow-white veil, advancing towards her over the heath. Presently she was at her side, and she saw her take from her hand the little flower, on which the old man had dropped a tear, and rub his eyes gently with it; and before long his eyes slowly opened, and all the landscape seemed full of glory, as of the ascending sun; and a hymn was sung. But here the dream was brought abruptly to an end, because Burdus, the faithful old dog, suddenly sprang up, and rushed away barking away over the heath.

The child rubbed her eyes, and believed that she must still be dreaming, because there was really a lady, like the one she had seen in her dream, advancing over the heath towards her. She wore light-coloured garments; her movement was easy and floating, and the wooing wind played with the veil that covered her bonnet. It was at this light and graceful figure that Burdus had barked so violently. When, however, she paused, and spoke to the dog kindly, he was silent, and turned back to his master.

The lady followed. Very soon she stood before little Elin, who dropped a timid courtesy, with the flower still in her hand, as she gazed with amazement into the large, dark, wonderful eyes of the strange lady. It seemed to the child as if there was a mysterious power, a mysterious light in them; and yet, at the same time, their glance was sorrowful, and the whole countenance pale, and expressive of suffering. She spoke to the old man, and inquired about his blindness, and then gently raising his swollen eyelids, looked carefully at his inflamed and sightless eyes; after this, she turned to the little girl, and said:—

"Would you not be very glad to restore sight to your grandfather?"

"Oh, yes!" said Elin.

"You would give him your own sight, would you not?" asked the stranger, half-smiling, and looking at her intently.

"Yes, that I would," said the child.

"But then you would not be able to see, nor to gather any more flowers," said the lady.

"Yes, but I know all the footpaths across the heath," said Elin; "I could find my way for all that!"

The lady continued to look with a keen, penetrating glance into the child's countenance; and, as she did so, a kind and sweet expression filled her own. "Gather," said she, "all the flowers you can find of the kind which you have in your hand, and bring them to me to-morrow morning early, and I will prepare a charm with them which shall restore his sight to your grandfather. Look there," said she, pointing across the heath, "you see where the little brook runs by the edge of the wood; follow its course a little way into the wood, and it will bring you to a white house. It is there that I live."

So saying, the lady kindly stroked the child's head, and proceeded homeward. Elin felt very much excited; she hardly knew how or why. A strange, mysterious feeling filled her mind; yet she was very happy at the same time. She feared, and yet she longed for the next morning, when she should see once more the strange lady who exercised such a fascination over her, and who would prepare the charm which should restore sight to her grandfather.

The old man in the meantime took up his

violin, and played, and Elin sang her customary evening hymn, which he had taught her:—

"Accept, O Lord, the humble praise
With which on earth our hearts adore thee;
A nobler anthem we will raise
When we rejoice in heaven before thee."

The hymn was ended, and the old man, covering again his white hair with his broad-brimmed hat, returned to his cottage, led by Elin, and followed by the faithful dog.

Elin the next morning was up with the sun, and hastened to the heath to seek for the flowers, of which she found a great many. She collected her little apron full, and then went with all speed across the heath in the direction which had been pointed out to her, to where the little brook rushed along the edge of the forest. It was a pleasant little murmuring brook, and at this point entered the wood, and its little waves hastening onward seemed to invite the child to follow. "Come with us, come with us," they seemed to say. The little birds on the forest branches, too, twittered and sang more melodiously than Elin had ever heard before. Her heart throbbed. "Even if I could not see," said she to herself, "I would yet hear the birds sing; and grandfather, who has been so sorrowful ever since he was blind, would be quite happy again if he could only see the beautiful sunshine!"

Thus speaking to herself, she reached the white house, which stood pleasantly, though very lonesome, among beautiful trees upon the banks of the stream, and, with a beating heart, she knocked at the door. The door opened. The strange lady stood there, and gazing fixedly at Elin with her dark, wise, mysterious eyes, said, "So, you are come, my child; and you have brought the flowers—good! Give them to me. But do you remember what I said?"

"Yes," said the child, courtesying, though her knees trembled; "I do remember, and though I should never see the sun and the flowers again, yet I shall never forget them—I shall remember how beautiful they are!" And with these words she burst into tears.

The lady looked at her for a moment in silence, and then said calmly, "You love your grandfather then so dearly that you are ready to give him your own sight?"

"Yes," replied the child, drying her eyes and looking calmly up into the face of the stranger.

A peculiar but beautiful smile passed over the countenance of the lady. "We shall see," said she; "in the meantime all is right. I will prepare from these flowers a lotion with which you must bathe your grandfather's eyes night and morning, and some day he will be able to see. And if you lend him your eyes for a while, you will not lose them. Blessed are the pure in heart, for they shall see God! In the mean time, whilst you retain your sight, and all the other good gifts which God has given you, be careful to make good use of them. Come!"

With these words she took the child by the hand and led her over her house and garden. It seemed to her as if she were wandering in some dream-world. She saw many wonderful things; stones, and plants, and animals which she had never seen before; and in the garden were many beautiful plants and flowers, the names and virtues of which the lady told her. She could not remember all their names, but she remembered that they were every one of them good for the cure or the alleviation of human ailments and sufferings. It was to Elin as if a new world had opened to her, and she felt as if she could stay here always, as if she would like to be always near that beautiful, grave lady, whose eyes beamed so strangely, and whose words sounded so sweet yet so mysterious, at the same time.

All at once, however, she remembered her blind grandfather.

"I must go home," said she; "grandfather will want me."

"Yes, go," said the white lady; "but come to me here every day. Come in the afternoon, when your grandfather is taking his after-dinner nap—then come and stay a couple of hours with me, and I will teach you the medical virtues of herbs. This knowledge may be useful to you some day. And bring with you every time as many flowers as you can gather of the plant which will restore sight to your grandfather."

The child hastened home, with a peculiar joy in her heart. Every day she returned, as she had been desired, to the stranger, who was known in the neighbourhood by the name of the Wise Lady. And every day she took with her a quantity of the flowers, and with the juice, properly prepared by the hands of the wise lady, she softly anointed the eyes of her blind grandfather, believing, poor child, all the time, that by this means, through some mysterious manner, his power of sight would be given to the old man; which belief, however, she carefully concealed from him.

"I suppose that I shall soon become blind," thought she, and the thought troubled her. Each day the lady of the wood taught her to understand and perceive the wonders of Nature, and communicated to her the knowledge of the healing powers which God had given to many herbs and plants; nay, she even assisted her in preparing ointments and medicines from them. And this knowledge and this power of usefulness afforded her great joy.

"But what shall I do when I can see no longer?" thought Elin. She resolved, however, not to think about this, but only of the great joy of her old grandfather, when he first should recover his sight. Morning and night she bathed the eyes of the old man as he slept, with the prepared juice of the flowers. "Towards Advent," the wise lady had said, "he ought to perceive a change."

Winter came, and all the white flowers slept under the white covering of snow; but their juices and their healing powers still were in operation, like the thoughts of good men, long after their death.

"It is very wonderful!" said the old man, one day, "but I do not any longer feel that burning sensation in my eyes, and I could fancy that I perceived a faint light through the night of my blindness!"

Elin trembled with joy and with terror at the

same time. She feared that now when her grandfather began to recover his sight, hers would begin to decline. She looked around her anxiously; the sun was setting, and she thought, "Perhaps I shall never more behold him!"

The morrow was the first Sunday in Advent. Elin awoke early. All was dark, for she had awoke long before dawn. "Now," thought she, "perhaps grandfather can see, and this is the beginning of my blindness. I will ask him to read to me!" In a little while she rose, dressed herself softly that she might not wake the cross old Grita who lived with them, and went into her grandfather's chamber, the window of which lay towards the east. The old man was sitting up in his bed, with his face turned to the window. The early glow of the sunrise tinged the eastern sky with crimson.

"O Father in Heaven!" exclaimed the old man, "I can see—I can see! There is the light of the rising sun! O my Lord and Saviour—I can see the blessed daylight!"

"And I can see it too!" cried the child, almost out of herself for joy, and flung herself upon her knees by the old man's bed and wept.

"Grandfather can see; and so can I at the same time!" exclaimed she, as somewhat later in the day she hastened to the house of the wise lady.

The lady smiled, took the child on her knee, and kissed her for the first time. "I merely wished to prove you," said she, "and I have found you steadfast." And for the first time Elin saw tears in her eyes.

The old man sat at home with clasped hands, and read aloud to himself, "The people who sate in darkness have beheld a great light."

Before long Elin sprang in and danced before him like a little fairy for joy. He took up his violin quietly, and played and sang in the joy of his heart.—

"Thou are the staff that stayed my weakness;
The flower that gemmed life's dreary bleakness;
My heart's best joy, my eye's delight;
The little star that cheered my night!"

They were all happy now; Elin, the old grandfather, and the pale, wise lady. The old man became happier and gentler in temper every day. The wise lady seemed to grow younger and more cheerful. Elin, light as a fairy, danced backwards and forwards over the heath, and seemed to divide her affections and her time between the two. Old Grita's temper mended wonderfully, because many a good dinner, and many a useful piece of household plenishing, came from the house of the wise lady to the poor cottage, and Elin always brought home with her a jug of milk when she returned from the white house in the wood.

In process of time Elin accompanied the wise lady in her visits to the poor cottages on the heath, and helped her to administer medicines which she herself had learned to prepare. She heard her talk to the poor, at the time she was attending them in their sufferings and sicknesses, of the Great Physician in heaven, and of his remedy, and of his words of consolation for the sick heart and mind. Day by day Elin learned more and more.

Thus passed on several years. The heath began to blossom like a garden. The inhabitants of the cottages became healthier, more cleanly, and better men and women. They had been taught by the wise lady, first to cultivate, and then to inclose one little field after another; to plant flowers, useful herbs, fruit-trees, and vegetables, for household use, all of which she at first gave them, around their dwellings. They also learned to love, and to bless, and serve God. And Elin helped the wise lady in all this.

One day Elin came to the white house weeping bitterly.

"Grandfather is dead!" said she.

"He is at rest with God," said the wise lady, "and you shall now live with me, and I will be as a mother to you. When I came here first, a great sorrow was in my heart; the unkindness of human beings had placed it there; but I knew that it would regain its joy and its health if I could only meet with one good, thankful, and devoted heart. God permitted me to find you; and through you my life has recovered its health and its joy. God has given you to me, and all that I possess shall be yours."

Elin did not understand exactly all that the wise lady meant, but she was unspeakably happy in the thought of always remaining near her, and walking everywhere, as it were, in her footsteps.

"When I am gone," said the wise lady, "you must remain in my place, as the physician and the comforter and the counsellor of the poor. That is a sacred vocation, and will be worth living for. You may thus become to many that which you have been to me, and which you was to your grandfather—gladness to the heart, and sight to the eye."

Elin lived for this purpose. Her life was devoted to it. She was good and she was happy; and she became to all the dwellers on the heath, like the little flower which had given sight to the old man, and to her a new life.

Elin was called *Euphrasia*, which is the name given by learned botanists to the little *Eyebright.*

NOTICE.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

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STRYCHNINE.

Edge tools are dangerous, except in the hands of skilful workmen. But even edge tools have handles and other appliances to prevent injury to those who use them. It is not so with deadly drugs. In the hands of the most skilful, they are at all times dangerous, and sometimes are destructive of human life. Many drugs which are now used by the faculty might be abandoned without any loss to the available pharmacopœia, and with great advantage and comfort to the community at large. There is a feeling of horror comes over the reflecting mind in knowing, that it is possible for the man who comes to you with the friendly avowal of doing you good, to aggravate your pain, or only sooth it to destroy your life, without much probability of detection; or that, without any malicious intention, he may so indiscreetly use a medicine, that your death shall be both a matter of surprise and grief to him. Such, indeed, is the character of strychnine, that it may be administered with the most deadly and murderous design, or it may be administered with the best intention and prove fatal in its effects. If there were no other reasons, these would be sufficient for us to plead for its discontinuance as a medicine. But there are other reasons why it should not be used medicinally on any occasion whatever. It is not at all required in the *materia medica*, because there are other medicines which will produce all the benefits ascribed to strychnine without the danger there is in its use. And further, if strychnine appear to be innoxious for a time, it leaves a residuum of results in the constitution which shows itself, at some future period, in convulsive spasms or paralytic symptoms.

Though it is admitted that vegetable poisons, when taken medicinally, are not so difficult to pass from the human constitution as mineral poisons used in the same way, yet strychnine is more difficult to eradicate than any other of its class. For instance, there are some few cases which have come under our immediate notice, where the constitution has been greatly enfeebled by opium, either in its crude or in its liquid form; and by abstaining from the poisonous drug, by pure air, frequent bathings and other sanative appliances, the deleterious effects have been counteracted and the patients have in a great degree rallied, with some small damage to the nervous system, continuing to show itself to the end of life; while, in reference to calomel, arsenic and other mineral poisons, we have seen them bidding defiance to all means to drive them from the constitution, while the effects have been of the most painful, if not of a fatal character.

With such a medicine at their disposal, medical men ought to exercise the highest amount of caution, not only in the use of it, but in all they say and write about it. Instead of this, we read an article in a medical journal last month which displayed the highest indiscretion in publishing a fact which, to many evil-minded and mischief-designing persons, would be a welcome piece of information, that they would not fail to use for the basest pur-

pose. We advisedly withhold the name and date of the publication, lest, in making them known, we should unwittingly promote the mischief we are most anxious to prevent. Suffice it to say, that when we read the paper to which we specially refer, and other papers in the same journal on the same subject, we were forcibly reminded of the remark we once heard from a nobleman, when pointing out and commenting on a *faux pas* of a certain gentleman, he said, "The worst of it is, that you professional men possess a great amount of learning, but you want common sense." The writers of the papers in the medical journal to which reference has been made, were entitled to put M.D. to their names, though, by those papers, they forfeited all claim to the far more enviable title of men of common sense. We readily acquit them of any intention to put into the hands of the depraved a destructive agent, and to teach them how to use it effectively; but we cannot for a moment doubt, that the information they have given will be applied by some to the worst of purposes. Knowledge is good; but the best things, in the hands of bad men, will be used for their own injury, and the damage of the community. It is therefore the duty of the journalist to publish that, and that only, which will benefit society, and to keep back whatever information may be used to jeopardise the lives of his fellow creatures.

Whatever may be the benefits which have been produced by the judicious use of strychnine in given cases of dyspepsia, hepatitis, uterine diseases and others which might be mentioned, we think that for the general safety and wellbeing of the public, it should never be allowed to be sold in this country, unless under such restrictions as might greatly facilitate detection in any instance of its being used for a criminal design. At present, the absence of any restrictions on the sale of strychnine, the information recently diffused relating to its properties, and the evil passions of human nature, so often roused to deadly designs, make this drug a terror to the country, and an available instrument of death within the reach of the most barbarous and profligate amongst us. It is high time that the legislature interfered in this matter, as it is a part of their legitimate duty to protect the lives and property of the subjects of the realm.

We cannot conclude this article without pressing on the attention of our readers the peculiar excellency of the Medical Botany system, which entirely excludes every poisonous herb, root and fruit, and admits only those vegetable productions which possess sanatory properties. After this system has gone through the crucible of persecution, and its enemies have done their worst to excite the prejudices of the public against it, they have never succeeded in proving that any poisonous drug has ever been administered. Those who have Dr. COFFIN'S "Guide to Health" will find the very diseases described, for which some have thought strychnine was necessary; but that work prescribes efficient remedies for those diseases—remedies which any patient may take with confidence of obtaining relief, and without the least apprehension that he will be poisoned, or that his constitution will be in the least degree damaged.

AUTOBIOGRAPHY
OF A
REFORMED DRUNKARD.

(Concluded from page 76.)

THE death of his wife was a severe blow to Colin; but he was greatly supported through this severe trial by the sympathy of his employers, who extended their kindness towards him. He had yet another trial to combat with, and that was to inform his son in the East Indies of the death of his mother. He received the melancholy news while he was upon guard: it cut him sadly to think that he was her only child, and how by enlisting he had broken her heart, and was the means of hastening her death. Colin himself was resigned to the will of Providence. Belonging to the Rechabite Society, he was sent as a delegate from his tent to the district meeting, which is held in Bath every year, and there Colin met with some of his old pot companions, who, like himself, could say, the snare is broken, and we are delivered. They earnestly pressed him to accompany them back to Gloucester, and to show to the inhabitants of that city what effect total

abstinence from all intoxicating liquors had had upon a confirmed drunkard, as it regards his person, manners, character, and respectability in life. Colin agreed to go as far with them, for he thought, if it will do any good, it would well repay him for his trouble.

When Colin and his companions got to Gloucester, Hughes' equestrian company, with their elephants, &c., had just arrived, and a great concourse of spectators were assembled. However, when they heard who was come to give a lecture on total abstinence, most of them left Hughes' show to see a greater sight—an Ethiopian made white—a leopard who had changed his spots—a confirmed drunkard reclaimed—a madman clothed and in his right mind—a rebel bringing forth his weapons of war, and throwing them down at the feet of his true sovereign. The teetotal meeting was to be held in the Friends' Meeting-house, and, within half-an-hour from the notice being given, it was filled to overflow. Colin contrasted his present general appearance with the last time they saw him leave their city, which was nearly four years since. Many of his old pot-companions saw him leave Gloucester a poor, ragged, dirty, emaciated drunkard, and without a shilling in his pocket but what was collected for him to pay his expenses to his destination. His appearance in the meeting-house as a temperance lecturer, they said, to use their slang language, "put quite a stunner upon them," as the most of them knew what he was, and what he had suffered when he was with them. He told them now of his experience in the teetotal cause—how he had increased in bodily substance—how he had provided for sickness, for old age, and death; he spoke to them for upwards of two hours, and they were well satisfied, as they said his countenance was a convincing proof that total abstinence from intoxicating drinks had the divine sanction, and that no doctor could have given him such excellent health, and no teacher (humanly speaking) could have so renovated his character except by the blessing of God. Colin's appearance and lecture in Gloucester were the cause of several drunkards signing the pledge, and, out of the number, a few entered into the Rechabite Society. Colin was much pressed to remain all next day in Gloucester, and he consented; but, before he went to bed, it was whispered to him that there were no less than five or six of the publicans and jerry landlords who had agreed amongst themselves that, cost what it might, if Colin came into Gloucester a teetotaler, he should not go out one. Colin did not wish to get into the lion's den—he knew what sort of a place it was—and to disappoint those poison-sellers, he arose the following morning at three o'clock, to get to Bristol by the first train, and was just in time, without one minute to spare. He got safe home that evening. This was at the latter end of the spring. In the following November, Colin was seized with a disease of the heart, brought on by the great excitement which the doctors attributed to his meeting with his wife after so long an absence, and her premature death. He continued getting worse, until his employers, with his medical attendant, urged him to reside by the sea-coast for a few weeks, and see what effect a change of air would have on his health. He went to Burnham, a village in Somerset, situated on the Bristol Channel. Here he got gradually better as the spring advanced, and here he felt the benefit of being a member of a Rechabite Society, for, without that aid, he could not have gone to a watering place; his sick-pay from that society was fifteen shillings per week for fifty-two weeks, if he continued so long sick. This is one of the benefits of total abstinence from all intoxicating drinks. If Colin had continued spending his money in drunkenness, he would no doubt have become the inmate of a union workhouse, and have been supported by the parish. Where then is the working man's independence, when he is obliged to go to a workhouse? Oh, if the tippler would learn to be wise, and while he is in the beer-shop or public house, applauding his own independence and freedom, would consider sickness, old age, infirmity, and the union workhouse, surely he would dash that deceiving and soul-and-body-destroying cup from his lips, and begin a new life.

Colin received a letter from his son in India before he went to Burnham, saying that the regiment had orders to return to England. They were marched from Arcot

to Madras, where they took ship for home. They put into the Cape of Good Hope, and there the regiment was detained, and they were ordered to hold themselves in readiness to go to Kaffirland, if required; but Providence interposed, and they set sail for their native shore, where they landed safe at Gravesend, after nearly a six months' voyage. His son wrote to him, and told him that it would be a month before he could get his furlough, to come and see him. Colin by this time was a good deal better, and had resumed his work again, though unfit for laborious employment. His masters told him that they did not require him to work to hurt himself, but to see that the other workmen did their work satisfactorily.

Colin's son, whom we will call John, was with his regiment quartered at Canterbury. When he had got his furlough for a month's absence, he wrote to his father that he would see him on such a day. Colin had been unwell two days previous to his son's coming to see him, as any little excitement or overexertion brought on a palpitation of the heart. John came down to Somerset by railway from London, and from the station he had twelve miles to walk before he got to his father's residence. Colin went out to meet him, and after walking about two miles he saw a soldier coming; and as he drew near, Colin saw in his son's face the countenance of his dear departed mother. He could not meet his son face to face without great excitement; so he turned back and let his son come up to him, and the following is the dialogue which took place between them:—

Colin. Well, young man, where are you going?

John. I am going to Street, sir.

Colin. Have you any relations or acquaintances in Street?

John. Yes, sir; I have a father there, but my mother is dead; but you may know my father, sir, his name is Mr. J— C—.

Colin. Yes, I know the old man well.

John. Sir, did you see him this morning?

Colin. Yes, I saw him.

John. Are you, sir, going past his house? could you show me where it is?

Colin. I am going past his house, and will take you there.

Colin asked him how he liked being a soldier, if he should feel it any pleasure to be freed from it, and to work for his bread at a lawful calling. He, in reply, told him that his father had written to him while in the East Indies that he would buy him off; but he thought that his father's means would be so limited by the long illness of his mother, and after his death his own long illness, which made him unable to follow his employment, that he would not be able to purchase his discharge; but should his discharge be procured, he said he should never more put the red coat on, but attend to his work, and with economy and frugality save money to repay the purchase. Colin told him that he heard his father saying but a day or two ago, that if he was a good lad, he would find some means to get him out of the army. When he heard this he was delighted. When they got near to the village, some of the neighbours accosted Colin by name: then Colin and John met as father and son, after an absence of twenty-five years. Colin's means were rather limited, therefore he could not do for his son as he wished. However, he was happy that he was with him, and his son seemed glad that he had found a father. His furlough was for four weeks, at the end of which he was to join his regiment, the 57th, lying at Canterbury, which he did. Colin set his wits to work how to get the money to purchase his son's discharge. The first application he made was to his employers, which, I am happy to say, was not in vain; they sent the required sum to the Horse Guards, and the authorities sent his discharge to the regiment, and he was forthwith discharged.

He is now working in the employ of Messrs. Cyrus and James Clark, along with his father, and is a teetotaler and a Rechabite; and may God uphold his feet that they may not slip, and may he know of a truth that total abstinence is a pioneer to the Gospel of Peace!—J. C.

It is nearly nine years since the author of these memoirs wrote the preceding narrative, and a great many changes have

occurred in that interval. Colin is still a consistent teetotaler, and greatly regrets that he was not one fifty years ago. His son John remained in Street for nearly four years, until he got proficient in his trade as a shoemaker; he then fell in with loose company, broke his abstinence pledge, idled his time away, and then, having complained that his earnings were not sufficient to maintain him, he left the place and obtained work in Northampton, in which place he was likely to remain some time. As far as his father could learn from him, he had again become a consistent teetotaler, until the time that the militia were embodied, when he was persuaded to enlist. Having been in the army for ten years previously, and discharged with a good character, he was made sergeant of a company. His colonel, noticing his sobriety and uniformity of conduct, promoted him to staff sergeant and orderly-room clerk, with a promise of further promotion, should his conduct continue as good as it was then. This was the last account his father had from him, about nine months since, as the regiment embarked for Gibralter.

In concluding this Autobiography, as Colin has had the practical experience of drunkenness, and the like experience of teetotalism, he would earnestly impress on the minds of those who take intoxicating drinks in moderation, either as beverages or stimulants, and to those who drink deep of the bewitching cup to banish care and sorrow, that there is no certainty in an uncertainty: for what man or woman who drinks in moderation can be sure of not turning out a confirmed drunkard at last? All drunkards were moderate drinkers at first. Moderators, beware! you are standing on a slippery place, and it is not in man to direct his own steps. Colin would advise such to give up the use of all intoxicating drinks, and flee to the city of refuge (the Total Abstinence Society) before the manslayer (drunkenness) overtakes you, who would shew no mercy. And to you who drink deep of the intoxicating cup, to drown care, sorrow, &c., or, in other words, "*because you like it*," you have got within the grasp of the manslayer—to get out of his clutches the struggle may be severe, and the sacrifice great; but if you wish to be happy, comfortable, and independent in this life, conquer the craving appetite for intoxicating drink. The writer of these memoirs has gone through the ordeal, and he says that the sacrifice is by no means to be compared to the comforts of total abstinence. In drunkenness you lose everything; in teetotalism you gain all the comforts that this world can bestow on you: amongst which are peace of mind, peace of body, peace in your own home, with other *pieces:* amongst which are a *piece* of bread and cheese in the cupboard, a *piece* of a salted side of a pig in the kitchen racks, a *piece* of beef in the pot, a *piece* of ground for a garden and site of house, a *piece* of good broad cloth in the house, to be made up into comfortable wearing apparel—and last, although not least, a *piece* of money in the pocket, and with a benevolent mind and a cheerful heart to give a trifle to help on the good cause. These comforts are some of the blessings attached to temperance families, who keep jugs without bottoms to fetch their beer, porter, cider, gin, rum, &c., home in.

And, in conclusion, may He that dwelt in the bush—the great disposer of all events and dispenser of all good—lead you in the right path by his Holy Spirit, and enable you to see by the eye of faith your way clear to the mansions of peace—the blessed abode of the spirits of just men made perfect in heaven, before the eyes of the flesh are for ever closed upon this scene.—J. C.

COMPULSORY VACCINATION.

THERE is a very strong feeling of dissatisfaction generating on the subject of compulsory vaccination, which at least deserves calm and considerate attention. It is a new thing in legislation to compel a man to undergo an operation, not for the cure, but for the prevention, of disease; and this not so much on his own account as in the interest of his neighbours; and nothing but a very strong case of necessity could justify such an interference with our individual liberties. Such a step, however, was adopted by the Compulsory Vaccination Act of 1853; and there is now a bill before Parliament to extend the provisions of that act. By this measure it is proposed to make vaccination

compulsory upon all children up to thirteen years of age; as well as upon all emigrants and crews of emigrant ships, all scholars in schools receiving aid from government grants, and all inmates of workhouses, lunatic asylums and prisons. In the case of the operation not proving successful in the first instance, it is to be repeated again and again, at intervals of not less than two months, until the patient shall have received a "certificate of insusceptibility to vaccine disease," which will be available to him for one year only; after which the same course of vaccination and revaccination will have to be gone through; and so on every year. All persons to whom the act shall apply will be liable to be called upon to produce a certificate of successful vaccination, or of insusceptibility to vaccine disease; and every person "refusing or neglecting to comply with any requirement of this act" will be liable to a penalty of twenty shillings, and five shillings additional for every day's continuance after notice. Besides these pecuniary penalties, which, though they may sometimes operate seriously, may yet not be found sufficiently heavy to enforce obedience where conscientious and rooted objections exist, except in the case of the poorer classes, there is a provision calculated to strike terror into the hearts of sensitive persons, and, as we think, wantonly to aggravate the pain of domestic bereavement. By the 27th clause, it is ordained that in the case of the death from smallpox of any child (that is a person under thirteen years of age) born since the 20th of August, 1853, a coroner's inquest shall be held on the body, with a view of ascertaining whether the deceased had been duly vaccinated; and, in default, of enforcing the penalties for neglect against the parents, through the agency of the poor-law guardians. This is carrying the terrors of the law beyond the grave in a manner without precedent in our humane criminal code. Besides all this, there is a clause in the bill, providing that, if smallpox shall become prevalent in any part of England, the Board of Health shall have power to issue special regulations as to steps for its repression "by revaccination or otherwise;" penalty for resisting any such regulations, £5.

Now it happens that, irrespective of the objections upon general grounds to this official interference with the cares and discretionary powers of parents in their dearest relations of life—in addition to the natural repugnance in the bosoms of all Englishmen against all that savours of arbitrary dictation and bureaucracy—there are very many persons who, whilst they entertain strong doubts as to the efficacy of vaccination as a preventive of smallpox, on the other hand have a painful impression that the process itself is sometimes attended with evil effects, in consequence of the difficulty of procuring the vaccine matter free from the taint of other disease. These are points, however, which we will not enter upon at present. We think it sufficient to call attention to the extraordinary compulsory provisions of this bill, and to suggest the question whether such an amount of interference with individual rights is now demanded in the interests of public safety.

WILD FLOWERS OF THE YEAR.

JULY.

"In the breeze
That wafts the thistle's plumed seed along,
Bluebells wave tremulous. The mountain thyme
Purples the hassock of the heaving mole,
And the short turf is gay with tormentils,
And bird's-foot trefoil, and the lesser tribes
Of hawkweeds, spangling it with fringed stars."

How often do a few lines like those placed at the head of this chapter bring before us the pleasant scenes of the country! The wide-spread, open down; the upland moor; the flowers which are springing in the fresh grass, or on the brown summer turf of the heath; how are they present to the eye of the mind, even while the bodily eye is gazing on the brick wall, or the city houses! The love of the country—the love of nature, affords, next to religion, the surest means of enjoyment; and may so well be connected with pious thought, that it is often the means of raising us above the world and its cares to the contemplation of God. It is very desirable that the young should cherish it; for he who has been taught to mark the beauties of the starry heavens, and the waving tree, and the wayside flower, has learnt a better lesson than if he had been taught to gather gold.

The heath-lands are so beautiful in

July, with their gorgeous array of flowers, that one can hardly imagine that the purple bells indicate that the soil is barren and poor. As the bleak winds chase over them in winter, they do, indeed, seem drear; but the seasons come round, and the Almighty causeth "it to rain on the earth . . . . to satisfy the desolate and waste ground, and to cause the bud of the tender herb to spring forth," and then the heath becomes a spot of beauty, fitted to invite the footstep and to charm the spirit.

Our five native species of heath *(erica)* are very lovely flowers, either of a dark-purplish red, or of a rose-colour, and are so little like our other wild plants that few would mistake them. The Highlanders thatch their cottages and make their beds of its sprays; and an old historian relates, that the Picts, who drank a great quantity of ale, made it of the young heath shoots. Carrington has some lines on this flower—

"How many a vagrant wing light waves around
Thy purple bells, Erica! 'Tis from thee
The hermit birds, that love the desert, find
Shelter and food. Nor these alone delight
In the fresh heath. Thy gallant mountaineers,
Auld Scotia, smile to see it spread immense
O'er their uncultured hills; and at the close
Of the keen boreal day, the undaunted race
Contented on the rude Erica sink
To healing sleep."

The ling *(calluna vulgaris)* is included among the plants which compose the heather; it is more like a small shrub, and has lighter-coloured and smaller flowers than the heaths.

The strong, sweet scent of the wild thyme *(thymus serpyllum)* comes up now to the wanderer over the moor, and it is one of the sweetest of wild odours. Among the Greeks, this flower was an emblem of activity. The highest-flavoured venison is furnished by the deer which feed on thymy lands, and sheep, too, thrive well on these places.

The bluebell, or harebell *(campanula rotundifolia)*, bends its azure, drooping blossoms to the winds, on the chalky cliff or barren hill of England, or Scotland, and graces the solitary ridges. Professor Lindley remarks:—"On the mountains of Switzerland there are species of harebell, with corollas of a pale yellow, spotted with black. On the Alps of India are others of the deepest purple that can be conceived. On the rocks of Madeira lives one which was, formerly, not uncommon in our gardens *(musthia aurea)*, whose corollas are of a rich, golden yellow; and, finally, on the pastures of the Cape of Good Hope, are Roellas, the flowers of which are elegantly banded with streaks of violet or rose, passing into white."

A little white harebell, sometimes cultivated in pots, is very common in the meadows of France; and from its modest and pure appearance is called "the nun of the fields."

On the moist bog, or heath, we should now search for the bog-pimpernel *(anagallis tenella)*, with very tiny leaves, and comparatively large, rose-coloured blossoms; and we may also find the bog or Lancashire asphodel *(narthecium ossifragum)* growing near it. The latter plant bears a spike of pretty yellow flowers, and is very similar to the tree asphodel *(asphodelus)*, renowned as the asphodel of the Greek poets, and as the flower with which the ancients planted their graves, and which they used in funeral ceremonies. This plant covers large tracts of land in Apulia.

That singular and interesting flower, the sundew *(drosera rotundifolia)*, grows commonly on moist, heathy grounds, and its white blossoms may be gathered in July. The curious structure of the leaf is well worth observation. It is covered with hairs tipped with pellucid glands, which exude a clear liquid; these glisten in the sunshine, giving the leaf the appearance of being sprinkled with dew, and by their sweet taste are very attractive to insects. These hairs are not only thick on the surface, but around the edge of the leaf. The insect on alighting on the plant is held a prisoner by these clammy hairs, and the leaf immediately closes over it. Dead flies and other small insects may thus often be found captured by this irritable leaf. The foliage of this flower is very much tinged with crimson, and on drying it for the herbarium, this red hue colours the page through several sheets. The plant is so small as that the whole of it might be covered by the palm of the hand. It is very frequent on the downs near Tunbridge Wells.

The sundew is used as an ingredient in

the celebrated Italian liqueur, termed Rossoli; it is, nevertheless, very acrid and caustic in its nature; when distilled with lime, it makes a highly stimulating drink, and, in former times, was much used as a tincture. The practice of expressing the juice, for the removal of the freckles and tan which the summer sun gives to the rustic maiden, has long been a common one; its juice is also said to curdle milk.

The various species of St. John's wort *(hypericum)* are now common everywhere, and their bright yellow flowers, with the scent of rosin, are very pretty. The yellow bed-straw *(galium verum)*, with its honey-like odour, is, when growing in any quantity, a very great ornament to the heath.

The tall broom-rape *(orobanche major)*, though not very beautiful, is too large and singular a flower to escape notice. This plant is a parasite, growing on the roots of the broom and furze, and even sometimes on that of the clover; it very much injures the plant on which it fixes. On heaths it is very common; it is one, two, or even three feet high, with a stem as thick as a finger, without leaves, but with brown scales. Its flowers grow down about a third of the stem, and are of a dingy, purple-brown. It has the appearance, on a cursory glance, of being a withered plant. The broom-rapes attach themselves particularly to plants which have butterfly-shaped blossoms.

The waste places are now enlivened by the beautiful tribes of thistles, whose minute, feathery seeds, flying so lightly on the breeze, seem in sufficient profusion to sow the whole land with their flowers. One cannot help remarking how, even when the curse was pronounced on Adam, good was mingled with the evil. God said, "Thorns also and thistles shall it bring forth to thee; in the sweat of thy brow shalt thou eat bread;" yet who shall say that toil is an unmixed evil, or that labour brings not an enjoyment with it, when he is the least happy who spends his days in listless idleness? So even also thorns bear roses, and the thistle brings forth lovely flowers.

We have more than a dozen species of wild thistle, difficult, however, to describe particularly. One species, the milk thistle *(carduus marianus)*, may be known by its large leaves, chequered with streaks of milky white. This is often called the Scotch thistle, but is not so, for, common as it is in England, it is very rare in Scotland; almost the only spot of that country in which it is known to grow is on the rocky cliffs near Dunbarton castle; and tradition tells, that the unhappy Mary, Queen of Scots, planted it there with her own hand. The beautiful cotton thistle *(onopordon acanthium)*, which grows by Scotia's highways, is cultivated by Scotsmen, as the Scottish thistle; it seems to have some claim to be regarded as the national insignia, for the hard and sharp spines well accord with the proud, defiant motto which accompanies it. The adoption of this flower as the national emblem is said to have arisen from the following circumstance: the Danes were invading the Scottish nation, and, according to their usual practice, attacked them during night, when they were sleeping; they had just reached the Scottish camp, when a Dane placing his naked foot on the spiny leaves of a thistle, instinctively uttered a cry, which roused the slumbering warriors, who quickly chased the invaders.

Several thistles have a large quantity of cottony down on their stems and leaves, which is picked off by country children for tinder; and their large number of seeds are eaten by birds, especially by the goldfinches, which feed almost entirely on the downy grains of flowers.

One of our wild thistles, the musk thistle *(carduus nutans)*, has beautiful purple blossoms, most powerfully fragrant in the evening; and a more common species, the carline thistle *(carlina vulgaris)*, which is about a foot high, may easily be distinguished from all the others by its yellow flowers; it is frequent on dry and hilly pastures.

The sweet marjoram *(origanum vulgare)* is now putting forth its clusters of chocolate-coloured blossoms, and shedding a sweet odour over the heath, or chalky bank; a very useful plant it is, too, for the dried leaves make a wholesome tea, and are used medicinally. A piece of cotton, dipped in the strong oil which may be expressed from it, will often cure the toothache; and the young tops are

used to dye cloth of a purple colour, and to given to linen a reddish-brown. Its scent is very similar to that of the wild thyme, and the flowers are much like those of that plant; but they grow on a stem one or two feet high, instead of forming tufts on the ground.

The corn is now fast ripening for the sickle, and very often the cornfield is covered with that bright flower, the corn bluebottle *(centaurea cyanus)*, verging from a deep blue to a pale azure, or a faint blue tint; its colour is always beautiful and striking. In Scotland it is called blue bonnet; in France, *bluet*. In former times, it was termed in our own land, hurtsickle; "because," says an old writer, "it hindereth and annoyeth the reapers, by dulling and turning the edge of their sickles, in reaping of corn." A brilliant blue juice is obtained by expression from this plant, which gives its tint to linen, but the dye is not permanent.

This flower is a great favourite with German ladies, and they frequently wear it in their hair; it is the companion of the ripening and ripened corn in all the countries of Europe.

The several kinds of scabious are also pretty and common flowers now; the field scabious *(scabiosa arvensis)*, termed by botanists field knautia, is very frequent on dry fields, and has large convex heads of flowers, of a beautiful purplish-lilac; these flowers, if held in the smoke of tobacco, become of a delicate green colour.

The devil's bit scabious *(scabiosa succisa)* grows in meadow lands, and is remarkable for its abrupt root, which seems as if bitten off; the fact is, that the top of the root actually dies away, and then a horizontal root is formed; but as no philosophy has yet accounted for the singular fact of this decay, we need not be surprised that, in olden times, it was believed that the great enemy of mankind bit it off in "envie because it had so many excellent vertues." "Unhappily," says Sir J. E. Smith, "this malice has been so successful, that no virtues can be now found in the remainder of the root or herb."

The blue succory, sometimes called chicory, or blue endive *(cichorium intybus)*, grows alike in cornfields and hedges, not only in England, but very generally on the continent. The Germans had an old name for it, which signified "keeper of the ways." It has large flowers, the size of half-a-crown, pale blue, and composed of rays, so as that it may truly be called star-shaped. In most of the chalky lands of England it is abundant; but it is generally rare in sandy soils.

The flower of the succory opens at eight in the morning and closes at four in the evening, and suggested some verses to a poet, true to nature.

> "On upland slopes the shepherds mark
> The hour, when to the dial true,
> Cichorium, to the towering lark
> Lifts her soft eye, serenely blue.
> Thus in each flower and simple bell,
> That in our path untrodden lie,
> Are sweet remembrances, which tell
> How fast the winged moments fly."

Alas! we little heed those silent teachers, or the more emphatic monitions of Holy Writ, of the fleeting nature of our time! yet the flowers bloom in beauty, and preach their lessons to us as they did to our fathers; and the Bible gives us its more direct and solemn warnings; but men live on and heed them not, and pass their fleeting lives as if the world were their final resting place.

The common sow thistle *(sonchus oleraceus)*, a plant known to every schoolboy as the food of his tame rabbit, and which is equally relished by the wild rabbit of the warren, has the same properties as the succory; and, like that flower, is full of milky juice. Its young leaves are sometimes eaten. This plant is termed by the American settlers, "gall of the earth," and is thought by them to cure the bite of the rattle-snake.

And now, by every wayside and waste place, the large leaves of the common burdock *(arctium lappa)* are spreading themselves out, and its dull, purple flowers, something like those of a thistle, seem small when compared with its foliage. A few weeks later, and these flowers will have changed to balls of seeds, covered with spines, and these fruits well deserve the name lappa, taken from the Celtic *llap*, a hand, for they catch at every passer by.

But it is pleasant, in these days of sunshine, to turn from the open and dry lands to the crystal stream, which wanders

by the wood, giving the sweet tones of its ripplings to all who will listen.

The glassy pool reflects on its bosom some of our handsomest aquatics. The white water lily *(nymphæa alba)*, its rose-like flower sitting on the water, has for its companion the yellow water lily *(nymphæa lutea)*, and both have large, oval leaves, so smooth and shiny that the water runs over them as if their surfaces were oiled. Then by the side, and almost down in the water, the meadow-sweet *(spiræa ulmaria)*, which, as a Kentish poet, Mr. Merritt, has said, has a flower of "lace-like embroidery," is so beautiful and so graceful, that the wind which is too soft to stir the stream, bids it nod and rise again, so prettily, that one might watch its motions and dream that it was some creature of gentle heart and elegant manners. Its odour is very fragrant, but it has too much of the nature of prussic acid to be wholesome in a close apartment. An instance of the dangerous properties of the meadow-sweet occurred in Kent, a few years since. Two young men, who had gone thither from London to spend a day in roving among hills and glades, and to gather the wild flowers from some of the sweetest nooks of that beautiful county, went, in the evening, laden with their nosegays, to a village inn. They had been struck with the loveliness of the meadow-sweet, and had gathered a large store to take away with them. In the night both became ill, and the surgeon who was sent for detected, immediately on entering their chamber, a strong scent of prussic acid. This he found to proceed from a quantity of the withering flowers of the meadow-sweet, which they had incautiously laid around and under their beds. Both suffered severely, and one of them so much so, that he remained ill for several weeks. This flower is sometimes called queen of the meadows, and the French too term it *la reine des près*. The stems are used in some countries for dying.

We have several very pretty willow herbs *(epilobium)*, which with their purplish-red blossoms deck the summer hedges; the handsomest of the tribe growing near streams.

The Kamschatdales are very fond of an intoxicating liquor made from some species, and they also prepare vinegar from them, and eat the young shoots as food.

The flowers of the willow herb are seated upon long pods, which contain a number of seeds crowned each with a tuft of down. These seeds are most frequently the produce of rayed flowers, like the dandelion and thistle; but some few flowers, as the willow herb and clematis, send them forth also by thousands. The latter plant is so covered with them, that if in winter it grow near a town, the hedge looks as if the spiders had been diligently weaving their tapestry about the branches, and produced a drapery of cobwebs; or if it be far away among the wild woods, where the smoke cannot reach it, it seems as if the swan had bestowed its down upon it. The great quantity of down yielded by the seeds of the willow herbs has induced some writers to recommend their cultivation for manufactures. The down has been mingled with fur or wool, and made into stockings, with very good success.

A very pretty aquatic, the water arrow-head (*sagittaria sagittifolia*), easily known from all our other water plants by its arrow-shaped leaves, is frequently found in the pools in July. It has white flowers, and its leaves lie in large masses on the surface of the stream. The root is most nutritious, and might well be used in this country as food; but in warmer climates, where the whole plant is more luxuriant, its large size renders it very valuable.

The "eresses, which grow where no man may see them," now often lie in abundance on the secluded stream. Our rural flora does not furnish a more wholesome salad herb than the water-cress (*nasturtium officinale*). The only danger which arises from eating this plant, is that the incautious cress-gatherer may have mixed with it some sprays of the water parsnip (*sium nodiflorum*), a plant common in streams, and which is very poisonous in its nature. Inexperienced persons may mistake one of these plants for the other, but a little observation will detect the difference between them. In the water-cress, the leaf which grows at the termination of the leaf-stalk is rounder and larger than the other leaflets; while

that of the water parsnip is smaller than the rest. The blossoms of the water-cress are white, small, and cross-shaped. This plant is now much cultivated in streams, near London, Paris, Edinburgh, and other large cities.

The salt marshes near the shore, and even the sands of the sea, now show a few blossoms. The white or pink heads of the thrift *(statice armeria)*, often called sea-turf, are very plentiful. The sea-lavender *(statice limonium)*, with its handsome spike of blue-lilac flowers, and that elegant, cypress-like shrub, the tamarisk (*tamarix Gallica*), with rose-coloured blossoms, which show to great advantage among its light and graceful foliage, often enliven the salt marsh or the rocky cliff.

On some of our shores too, the tall sea-holly (*eryngium maritimum*) makes its appearance on the sands. It is a stiff and rigid plant, with firm, prickly leaves beautifully veined; and, like those of the generality of our sea-side plants, of a pale, sea-green hue. Its flowers are blue, and shaped much like the thistle's. The roots have a pleasant taste, and are often candied for a sweetmeat, being considered stimulating and restorative in their properties. Linnæus says that the young shoots of this plant are eaten in Sweden, after being blanched, and are scarcely inferior to asparagus. He recommends their use in other countries.

The sea-weeds (*Fuci*) are always scattered over the shores, for they are little affected by the changing seasons. The bed of the ocean being less exposed to changes of temperature than the land, and the great body of water being never either completely hot or cold, the plants growing in the sea do not experience that change of seasons which so determines the growth of land vegetation. In some seas, however, marine plants are much more luxuriant than around our island. In all countries, the base of the ocean is continually rising by the increase of plants, just as the site of the city rises in progressive years by the accumulation of soil.

Sea-weeds afford soda and colour for dying; and their gelatinous nature renders many of them nutritious and medicinal. Iodine, so often administered in cases of glandular enlargement, is procured from several species of sea-weed.

The woodland scenery is not so brightly green as during last month. Although autumn has not yet touched the leaves with brown, yet their verdure is of a duller cast, and here and there the slight tinge of yellow may be seen. The flowers in the wood are also few now, compared with those of the earlier months. The tall teasel *(dipsacus fullonum)* shows itself almost like a young shrub; and that pretty, low flower, the red centaury *(erythræa centaurium)*—its red blossoms growing in clusters, and shaped something like those of the garden jessamine, though smaller—is very common, both in woods, and on dry pastures. Its bitter principle is said to be equal to that of the gentian. This flower closes so early that only those who walk in the former part of the day see its beauty. By twelve o'clock it begins to shut up; and, if a cloud is on the sky, it does not open at all. This is evidently because of the moisture of the atmosphere, even when it is not perceptible to us; for, if the flower be taken in-doors and placed near a fire, it will expand fully.

The wood sage (*teucrium scorodonia*), a common plant, with spikes of green flowers, tinged with a brown hue, is now very plentiful on dry grounds. It has leaves wrinkled like those of the garden sage, and so bitter that they are very suitable for the purpose of mingling with hops in making beer—a use to which they are continually applied by the Swede, and sometimes by the English cottager. The betony, too (*betonica officinalis*), is very generally in flower in this month. This flower has somewhat the appearance of the red dead nettles, though its purplish-red blossoms are lighter and brighter than theirs. In some parts of Kent, it is commonly gathered in bundles and hung up around the ample fireplace of the farm kitchen, or suspended from the cottage ceiling ready for use. The whole plant gives a yellow colour to wool, and the root is extremely bitter.

The hedge wound-wort (*stachys sylvatica*) is also very common in the hedge from June till August. It has around its stem a number of purplish-red flowers,

streaked with white, and leaves something like those of the stinging nettle in shape, but very silky and downy. Its old, familiar name distinguishes it as a plant often used for staying the effusion of blood. This flower was also called clown's all-heal. When compounds and extracts from plants and minerals were less common than at present, an acquaintance with the virtues of plants was of more value than in modern days.

The common black horehound (*ballota nigra*), with is whorls of dull, cheerless red flowers, and its dusty-looking foliage, was once thought a very useful plant, and is still sometimes made into a candied sweetmeat. Country people say, that the plant has an odour of graves, but its frequent growth in churchyards probably contributed to this idea. The catmint (*nepeta cataria*) is another common plant, and it is really amusing to see how cats are excited by it, and with what avidity they devour it. Its scent is too strong to be agreeable.

(To be continued.)

VARIETIES.

Air Poison.—People have often said that no difference can be detected in the analysation of pure and impure air. This is one of the vulgar errors difficult to dislodge from the public brain. The fact is, that the condensed air of a crowded room gives a deposit which, if allowed to remain for a few days, forms a solid, thick, glutinous mass, having a strong odour of animal matter. If examined by the microscope, it is seen to undergo a remarkable change. First of all, it is converted into a vegetable growth, and this is followed by the production of multitudes of animalcules—a decisive proof that it must contain organic matter, otherwise it could not nourish organic beings. This was the result arrived at by Dr. Angus Smith, in his beautiful experiments on the air and water of towns; wherein he showed how the lungs and skin gave out organic matter, which is in itself a deadly poison, producing headache, sickness, disease, or epidemic, according to its strength. Why, if "a few drops of the liquid matter, obtained by a condensation of the air of a foul locality, introduced into the veins of a dog, can produce death with the usual phenomena of typhus fever," what incalculable evil must it not produce on those human beings who breathe it again and again, rendered fouler and less capable of sustaining life with each breath drawn! Such contamination of the air, and consequent hot-bed of fever and epidemic, it is easily within the power of man to remove. Ventilation and cleanliness will do all, so far as the abolition of this evil goes, and ventilation and cleanliness are not miracles to be prayed for, but certain results of common obedience to the laws of God.—*Dickens's Household Words.*

Breakfast.—The morning meal or breakfast —the "early bit" of the Germans—is, perhaps, the most important of the day. According to Erasmus Wilson, it is usually "taken at eight or nine." The proper period for that purpose must, however, depend upon the time at which the party rises. About an hour after leaving the bed will be found the most appropriate for the morning meal. By that time the powers of the system have fully recovered from the inactivity of sleep, and the functions of the stomach and other viscera have again come into play. The appetite is excited, and seeks appeasing: and both instinct and reason direct us to the social board. If abstinence is now prolonged, the physical and mental energies, unsupported by a supply of food, which indirectly gives them birth, gradually lessen, and incipient exhaustion ensues. The fluids of the stomach and smaller tissues begin to act upon the coats of those viscera instead of the food, and an unpleasant feeling of hunger or a loss of appetite comes on as a natural consequence. When breakfast cannot be taken within a reasonable period after rising, the gap should be filled up by chewing a crust, a biscuit, or the like. A raw egg or two "sucked" from the shell, or broken into a teacup and drunk, will be found most valuable for the purpose. Raw milk, cheese, salted food, and other indigestible matter, should be particularly avoided at this early period of the day.—*Cyclopædia of Practical Receipts.*

Precocious Children.—It is a great injury to children to force their talents early in life. There is but one authenticated case on record where a clever child made a talented and an extraordinary man. An excellent little work by Dr. Brigham explains the reason of this. The brain of the child is not completely developed till about the fifth or sixth year, and no violent action should therefore be excited on it before that age. Precocious children usually die early; and indeed it has been asserted, that early infant tuition when carried beyond moderate limits, is a fruitful cause of consumption and scrofula.

NOTICE.

A Public Tea Meeting will be held at the Freemasons' Tavern, Great Queen Street, on Wednesday evening, August 6, 1856. Dr. Coffin and several other Gentlemen will address the meeting. Dr. Coffin's Agents will be present on the occasion. Tea on table at six o'clock precisely. Tickets, 1s. 6d. each, to be had of Mr. W. B. Ford, 134, High Holborn, and 24, Union-street East, Spitalfields; of Mr. Stephens, 108, Ratcliff Highway; of Mr. Blinkhorne, 2, Essex-street, Stratford; and of Mr. Wood, 18, Charlton-street, Somerstown.

Post-office Orders and all communications for goods &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S

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AND

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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VACCINATION.

We have not been indifferent to the discussions which have been going on upon this subject. We have purposely abstained from introducing it into this Journal until we had heard the opinions of others, and given ourselves time to examine and weigh those opinions, and the reasons by which they were supported. The name of Dr. Jenner is placed by some among the first benefactors of our race for introducing vaccination into this country. His title to that honour is very questionable. Before it can be determined, it must be shown that the progress of disease and death has been arrested, and that the parties exempted from small-pox by vaccination are in as good health as those who have survived the ordinary attack of the latter disease. There are, unhappily, many cases of persons who have enjoyed uninterrupted health for several years before vaccination, but, after they have submitted to it, have been constantly ailing, having cuticular eruptions, and other proofs of physical derangement; while there are other cases of persons who have never been vaccinated, and who have scarcely known a day's illness until they had passed their seventieth year. Among those who have never been vaccinated, we have not met with a single instance of disease in the teeth; on the contrary, we have known many of this class who have reached a good age with all their teeth perfectly sound and healthy. Among those who have been vaccinated, all, without a single exception, have been much troubled with decaying teeth, neuralgic affections and diseases of the gums. These considerations induce us to demur to the practice of vaccination, and to enter a decided protest against compulsory vaccination.

The legislature steps out of its proper province when it attempts to prescribe laws which affect the individual liberty of the parent in his physical treatment of his children, and compel him to inflict a positive evil on those whom he is bound to sustain and cherish. The legislature degrades itself in the eyes of the country when it enacts laws which it cannot enforce. Legislation becomes a farce, and the basis of a most ridiculous comedy, when it is so at variance with the dictates of our common nature, and so repulsive to all the instincts of the social compact as to make resistance virtuous, and disobedience an occasion for the applause of the most intelligent portion of the community. We have only to imagine a prosecution commenced against John Jones for refusing to have his children vaccinated —the accused is charged with a criminal offence—treated as a felon. In some countries, the whole legal process, or legal mockery, might be carried on, and tortures inflicted till death released the accused, and nothing be heard of it except the issue. But in this country there cannot be secrecy in an arrest; and the said John Jones might be perfectly satisfied, that, if he were placed in *durance vile* for resisting an attempt on the lives of his children, a most vigorous effort would be made by every man worth the name of a Briton to effect his deliverance at any price, or at any risk. Before such an effort all official power would quail and shrink into ob-

scurity, while the instincts and the voice of nature would be heard and honoured.

We have before us a pamphlet on "Compulsory Vaccination," by John Gibbs, Esq., and as many of our views are herein fully set forth, we transfer portions for the careful consideration of our readers who may have read but little on the subject. Mr. Gibbs very justly says:

It not only unspeakably degrades the free-born Briton by depriving him of liberty in a personal matter, but denies him the possession of reason; outrages some of the finest feelings of the human heart—those feelings which have their origin in parental love—that still bright spark of the Divine Nature breathed into man by his Heavenly Father; sets at nought parental responsibility, and constrains the parent either to violate his deliberate convictions, and even his religious scruples, or boldly to defy an unjust law.

The pith of this statute is in the 2nd and 9th clauses, which enact that the parent or guardian of every child born in England after the 1st of August, 1853, shall cause it to be vaccinated within a specified time after birth, unless vaccination be postponed under a medical certificate, or series of certificates, of unfitness, and that a pecuniary penalty shall be inflicted for noncompliance with the requirements of the Act.

Now, by what pretext is it attempted to justify such an outrage upon the constitutional liberties and natural rights of the subject? And, if vaccination be a blessed boon, is it not strange that in Jenner's own land of thoughtful Englishmen, after the experience of half a century, during which it has been fostered by the State, a practice which appeals so strongly to human hopes and fears can be popagated only by penalties?

Wherefore, then, is vaccination held in abhorrence by so many? Have those who reject it no weighty reason to justify their rejection? They do not believe that it affords an efficient and assured protection against the invasion of smallpox; they have a natural disgust to the idea of transferring to the veins of their children a loathsome virus derived from the blood of a diseased brute, and transmitted through they know not how many unhealthy human mediums; they have a dread, a conviction, that other filthy diseases, tending to embitter and shorten life, are frequently transmitted through and by the vaccine virus; they cannot bring themselves to believe that, under any circumstances, the true way to *health* and *longevity* can be to corrupt the blood and lower the vital energies by the infusion of a poison and its consequent train of morbid actions; and, further, they have a conscientious conviction that voluntarily to propagate disease is to fly in the face of God, and to violate that precept which says, "Do thyself no harm."

Are such scruples and objections entitled to no respect? Should they be permitted to have no force? Are they capable of no justification? Should the sole answer to them be a Coercion Act? Such is not the best way to disarm hostility and to ensure conviction. Who would put faith in the professions of the philanthropist who should threaten the object of his beneficence with fine or imprisonment if he should not accept the proffered boon? Or who could receive with cordiality and respect the Doctor of Physic who should thunder at the door, armed with scab and lancet, threatening to assault the inmates therewith, and although he should protest that he was bent upon a mission of mercy, who could avoid suspecting that his real objects were power and gain? If vaccination be indeed a blessing which must needs be showered upon the land, would it not better become a wise government and a free people to commend opinions by disseminating information upon the subject, than to attempt to make unconverted converts by force?

What reasons can the advocates of vaccination assign for the faith they hold? Scarcely one of them has ever investigated the subject scientifically. They cannot plead even the unanimity of the profession on their side. "In the public mind extensively," says the *Lancet* of May 21, 1853, "and to a more limited extent, *in the profession itself,* doubts are known to exist as to the *efficacy* and *eligibility* of vaccination. The failures of the operation have been *numerous* and *discouraging.*"

Vaccination, then, by the confession of the vaccinators themselves, is not an unfailing protection against smallpox. The experience of most persons will testify to the same effect; and ample corroborative proof may be found in the *Returns of the Registrar-General.* I cannot allow myself to make use of any extracts from these important and able papers without, at the same time, respectfully and thankfully acknowledging my many obligations, both to the Registrar-General and to Mr. Thomas Mann, for the courtesy and kindness with which, on various occasions, they have complied with my requests. In No. 10, vol xv, for the week ending March 11, 1854, we find, "A grocer died in South-street, Chelsea, at the age of fifty years, 'of confluent smallpox (fourteen days).' He had been vaccinated when one year old." In No. 45, vol. xiii, we read:—"In the sub-district of Haggerstone West, at 46, Essex-street, on 1st of November, the daughter of a bricklayer, aged five years, died of '*variola confluens* (nine days), *vaccinated with effect when six months old, marks perfect.*' Mr. Bowring mentions that 'four out of a family of seven have been attacked, and the survivors are still suffering under the disease. *All were vaccinated* between the ages of four and six months; *the cicatrices still perfect.*' He also records a death from smallpox without vaccination, and adds, 'a prejudice against vaccination, of which this is another instance, is gaining ground in my district.'" It would appear that by a prejudice Mr. Bowring must mean an unfavourable opinion founded on experience. To proceed:—in No. 41, vol. xiii, we find:—"At 82, Earl-street, Lissongrove, the daughter of a bottlemerchant, aged one year, died from 'confluent smallpox (fourteen days), *vaccinated seven days previously.*' The medical certificate adds, 'vaccinated on the 23rd of September, in two points on each arm. Smallpox first showed on the skin on the 30th. *Both diseases progressed* in a modified form for five days, when the child fell into a typhoid state.'" In this case, smallpox and cowpox *have possession together.* Which of them killed the patient? The number for the week ending March 25, 1854, furnishes another instance of the failure of vaccination to protect. "On the 17th of March, the son of an ostler died, aged six years, smallpox (five days), vaccinated." The Weekly Return, No. 14, vol. xv, for the week ending Saturday, April 8, 1854, furnishes similar evidence:—

"Six deaths occurred from smallpox: three of these, of which the following are the particulars, in the Smallpox Hospital:—

"On 31st March, a boy, aged ten years, from Holborn Union, 'smallpox confluent (twelve days), unprotected.'

"On 1st April, a boy from Somers Town, aged five years, smallpox confluent, modified (nine days). He had been vaccinated at the age of four months; one cicatrix."

"On 7th April, the wife of a labourer, from Lambeth, aged twenty-two years, 'smallpox confluent, unmodified (eight days).' Vaccinated in infancy in Suffolk; two good cicatrices."

In the Quarterly Return, No. 20, 1853, at page 42, we find:—

"Chorlton Hulme.—The mortality of last quarter has been heavy: twenty-two deaths have occurred from scarlatina, sixteen from hooping-cough, and seven from smallpox; *five members of one family suffered from the last disease most severely*, the father and four children. *They had all* been previously vaccinated, and, as reported, with success. *Two died;* and a boy, who had not only been vaccinated, but previously had the smallpox (and was very much disfigured), was one of the victims. This manifests a very strong predisposition in some families for certain diseases."

In No. 17, under the head of Taunton, the following appears:

"There has been *one death from smallpox*, that of a male, twenty years of age, *vaccinated in childhood.*"

In No. 19, it is stated under the same head:—

"Taunton.—Autumnal diarrhœa has been prevalent, but not of a severe character. *In other respects the district has been free from disease.*'

Taunton is not specially mentioned in the two remaining numbers. In connection with the apparent small mortality from smallpox, and the generally very healthy state of the place, the following extract from the *Lancet* of July 2, 1853, is particularly deserving of notice:—

"At Taunton, Mr. White reports that vaccination has become almost extinct; and that *in a population of between* 4000 *and* 5000, *not one case has offered for vaccination in the last two and a half years.*"

Do not these facts suggest that there may be some protection against smallpox other than vaccination.

Many similar extracts might be made, but enough. Should further evidence be desired, the returns may be consulted with advantage. However, I cannot refrain from adding that, *during a period of sixteen years, ending in* 1851, "*rather more than half the patients admitted into the (Smallpox) Hospital had been previously vaccinated.*"—(*Medical Times*, August 27, 1853); and that out of 800 patients admitted into the same hospital in 1852, *only* 230 *were unvaccinated* (*Lancet*, Feb. 12, 1853); in other words, 570, or considerably more than two-thirds of the whole, had been vaccinated; facts which of themselves strongly impugn the claims put forward on behalf of vaccination, but which seem scarcely less than conclusive when coupled with the following statement:—

"In the City of London Union, in which, in the year 1851" (that is, in the year *preceding* the one in which the 570 vaccinated patients were admitted into the Smallpox Hospital), 'the births are returned 1311, only 61—*i. e.*, about a twentieth of the whole number—were protected during the first year by the lancet of the Union surgeon. In St. James's, Westminster, only 38 out of 973 births; and in St. Matthew's, Bethnal Green, consisting chiefly of poor persons, only 817 out of 3589.'"—*Lancet*, July 2, 1853.

It is asserted that, if vaccination "does not always [does it ever, except when it proves fatal?—J. G.] prevent smallpox, the attack is much milder." So mild, indeed, is it, that, in illustration, it might be added (on the authority of Dr. George Gregory), that, out of 298 patients having smallpox after vaccination who were admitted in the course of a year into the Smallpox Hospital, 31 died; and (on the authority of the Registrar-General) that, out of 432 deaths from smallpox in an epidemic season, in a period of ten weeks, in London, 135 deaths were returned as occurring after vaccination—and this, be it remembered, in a population, of which it is complained by the advocates of this *antidote* (?) that it is much neglected.

Indeed, so notorious are the failures of vaccination to afford protection from the ravages of smallpox, that the *Lancet* is forced to account for them by pleading that a supply of effective lymph has never been provided; that the extension of vaccination has hitherto been entrusted to parsimonious boards of guardians, who not only accepted the lowest tender, but were displeased if called upon to pay for many operations; and that vaccination has never formed part of the education of medical men, but that each practitioner is left to pick up his experience how, when, and where he can. In one place the *Lancet* asserts that "the best mode of vaccination is yet undetermined;" and, in another, complains of a "want of agreement in the profession as to the essentially pathognomonic signs of genuine vaccine inoculation." Be these accusations worth what they may, they fully justify the spreading disbelief in the efficacy of vaccination.

But, possibly, another reason for the failures of vaccination may be found in the following extract from the "Destructive Art of Healing," by Dr. Samuel Dickson:

"Very different have been the reasons given by Professor Alison, of Edinburgh, for his adoption of a new course. With Dr. Copland, Dr. Watson, and other English physicians of mark, Professor Alison ascribes his change of practice to a change in the type of disease. According to these gentlemen, human nature has completely altered within the memory of the present generation; nay, within the last ten or twelve summers it is not what it was;—why or wherefore, no two of these three great doctors can agree. By one very distinguished physician we are called to believe, that the 'malaria from wood pavement has caused all diseases to assume an intermittent type.' Another will have it that the gradual substitution of 'tea and potatoes,' for ale and animal food in the diet of the people, has very considerably mitigated the ferocity of all complaints. Indeed, certain gentlemen, with the eminent Dr. Alison at their head, assure us that the diseases even of horses, asses, and horned cattle, have also, within the present century, been materially changed. By 'tea and potatoes?' No; but 'somehow or other.' Many doctors, nevertheless, declare, with Dr. Watson, that the human constitution has been certainly altered since the cholera came to England in 1832. According to these last, the cholera has not only altered the constitutions of those it attacked, but it has, 'somehow or other,' completely changed the constitutions of those it never attacked at all." [Just as vaccination protects those who have never been vaccinated.—J. G.] "But whatever be the true theory of the cause of this change of type, nothing is more certain than that the people of these degenerate times cannot bear depletion as they formerly did; for that fever, *smallpox*, chickpox, and the like, are no longer the inflammatory diseases they used to be. Even epilepsy, palsy, and apoplexy—according to certain gentlemen—can no longer be treated 'antiphlogistically.' So changed, in a word, has become the type of all diseases, the most sanguinary surgeons—Mr. Gurhrie, perhaps, excepted—can by no possibility adopt the lowering

measures they adopted within the last dozen years in cases of accident—broken heads and bones, for example—not in these islands only, but all throughout the civilised world."

If this be so, is the experience of Jenner of the slightest worth in determining the present value of vaccination? If the human constitution, type of disease, and action of remedies, be thus all changed, have vaccination and small-pox alone escaped the common fate? Nay, the question irresistibly obtrudes itself, Has vaccination had as much to do with the deterioration of the human constitution as "malaria from wood pavement," "tea and potatoes," and "cholera?" Certainly one would expect its influence to be more widely diffused than some, and more permanent than others, of these causes.

What is the relative percentage of deaths from small-pox amongst the two classes, the vaccinated and the unvaccinated? The Epidemiological Society confess their inability to satisfy this inquiry.

It is not enough to investigate how far vaccination operates as a protection from smallpox. There are other points to be considered before pronouncing an opinion for or against the practice. The main question for the consideration of science is, not whether vaccination be a protection against one form of disease, but what is its general influence upon the constitution? Does it militate against health and longevity? Does it lower the vital resistance, and predispose the system to receive, or does it actually introduce into it, other forms of disease? In some cases, does it even predispose the system to succumb to the invasion of small-pox itself? How else shall we explain those facts of which the following is an example?—

"At 1, Adam's-row, Lambeth, on 2nd April, the son of a smith, aged one year, died of 'variola confluens (ten days).' The child had been twice vaccinated, but without effect."—(Reg. Gen. Weekly Return, No. 14, vol. xv, week ending April 8, 1854.)

What is the percentage of deaths before a given age, from *all* epidemics, amongst the vaccinated, as compared with the unvaccinated? What is the percentage respectively of cases of disease of the respiratory organs, of skin diseases, of scrofula, and of convulsions? What is the average duration of life amongst the vaccinated and amongst the unvaccinated? Of a thousand children vaccinated within a given time after birth, and of a thousand unvaccinated, the whole two thousand being placed as nearly as possible in like circumstances, what percentage in each thousand attain the age of puberty? These are statistics with which the advocates of vaccination have never grappled. Is it not, then, *rather premature* to decide that vaccination is an unmixed good—a boon, which we ought not only gratefully to accept, but which we should even combine to force upon the acceptance of others? If it should appear that, before a given age, the ratio of mortality, *from all causes*, be the same amongst a thousand vaccinated and a thousand unvaccinated children, of what avail is vaccination? Of what import is it, as a public question, in what shape death claims his allotted number of victims, whether by small-pox, scarlet fever, or hooping-cough? If the ratio of mortality should prove to be greater amongst the vaccinated than amongst the unvaccinated, should it not suggest some grave suspicions that vaccination is a curse, and not a blessing? *A priori* there is nothing in vaccination to recommend it as a prophylactic. Surely, then, the *onus* rests with the compulsory vaccinators themselves to prove both the *efficiency* and *harmlessness* of their mysterious nostrum; to prove that the practice is something more than a game of chance, a throwing of the dice for life or death. This is only what *prudent people* would demand of the vendors of any specific. Vaccinators have no right to defy the laws of logic and common sense by requiring that those whom they fail to convince shall prove a negative.

First, then, is vaccination ever attended with risk, is it ever injurious, is it ever fatal to the recipient?

In the Registrar-General's Weekly Returns, No. 30, vol. xiv, for the week ending Saturday, July 23, 1853—a few days before the passing of the *Compulsory Vaccination Act*—we read:—

"In Bethnal Green, at 19, Warner Place South, on 15th July, the son of a cabinet-maker, aged seven months, died of *vaccination*, *erysipelas*."

In the "Weekly Return," No. 13,

vol. xv, for the week ending Saturday, April 1, 1854:

"In Mile End Town Lower, the daughter of a gentleman, aged three months, died of 'erysipelas.' The medical man states that it supervened on vaccination."

In the "Weekly Return," No. 14, vol. xv, it is stated that—

"At the German Hospital, Dalston, both on 30th March, the son of a mariner, aged ten weeks, and the son of a sugar-baker, aged thirteen weeks, died of 'general erysipelas after vaccination, effusion on the brain.' The medical attendant adds, in his certificates, that 'both these children were vaccinated on the same day in Whitechapel Road, and were in the hospital two days.' The cases appear to be such as demand investigation. In Ratcliff, at 2, Devenport Street, on 6th April, the son of a coal-merchant, aged three months, died of 'erysipelas all over the body (one day) succeeding vaccination, which was considered to be fine.'"

"Demand investigation!" Does not the whole question of vaccination "demand investigation?"

Other cases of legal infanticide are thus reported:—

"In Mile End New Town, at 1, George Street, on the 17th July, the daughter of a carman, aged three months, erysipelas after vaccination (three weeks), convulsions (twenty-four hours)."—Weekly Return, week ending Saturday, July 22, 1854.

"In the south sub-district of St. Giles, at 8, Parker Street, on 13th April, the daughter of a mason, aged one month, '*irregular vaccination when a fortnight old.*'"—Weekly Return for week ending April 15, 1854.

"At the Cock and Castle, Kingsland, on 1st May, the son of a licensed victualler, aged four months, died of '*vaccination, inflammation of cellular tissue of arm and thorax.*' In Haggarston East, at 54, Union Street, on 1st May, the son of a hotpresser, aged four months, died of '*gangrene after vaccination*' (fourteen days)."—Weekly Return for week ending May 6, 1854.

Having seen that *vaccination is frequently an immediate cause of death*, let us next inquire whether it ever introduces other diseases besides cow-pox into the system.

Dr. Jones Quain, after describing the symptoms of cow-pox (Manual of Pathology, p. 366), thus concludes:—

"Every eruption after vaccine not presenting these characters is spurious."

From this it is evident that Dr. Quain discerns a connection between vaccination and spurious eruptions. Other medical writers are more explicit. The *Lancet* (a zealous advocate of vaccination) says:—

"There is a belief—it may be denounced as a prejudice, but it is not the less a deeply rooted conviction, and one not confined to the poor or the ignorant—that if the vaccine disease may be transmitted by inoculation, other diseases, less beneficial, may be propagated in the same manner, and by the same operation. Many a parent, of high and low degree, dates constitutional disease in her offspring to vaccination with 'bad matter.' *Who shall say that this etiological conclusion is always false?*"—*Lancet*, July 15, 1854.

"The poor are told that they *must* carry their children to be vaccinated by medical men who may be strangers to them. They apprehend—and *the apprehension is not altogether unfounded*, or unshared by the educated classes—that the vaccine matter employed may carry with it the seeds of other diseases not less loathsome than the one it is intended to prevent."—*Lancet*, October 23, 1854.

"So widely extended is the dread that along with the prophylactic remedy something else may be inoculated lest the germ of future diseases may be planted, that *few medical practitioners would care to vaccinate their own children from a source of the purity of which they were not well assured.*"—*Lancet*, November 11, 1854.

If such be the opinions of medical practitioners in general, let us hear the sentiments of a few of them in particular; and to avoid the imputation of partiality, let us select indifferently from opposing medical sects and various nations.

An American medical author, Dr. Shew, commenting on a case of death from vaccination, which was reported in the *New York Journal, Medical and Surgical*, gives a case of a lady whose health had been injured by vaccination, and adds:—

"In two other cases, large swellings took place, one in the armpit, the other in the neck, lasting for some days, and finally breaking out in running sores. By questioning closely, *we not unfrequently find that children never enjoy good health after vaccination, however firm it might have been before.*"

In another place, the same author says:—

"After all the recommendation that this practice has had for the last fifty years, there are yet those who entertain honest doubts as to whether it is, after all, on the whole, a benefit to the race. At any rate, the question, like all others, has two sides, both of which demand our most honest consideration. It is certainly true that vaccination does not merit the encomiums which its more early advocates put upon it; nor is it anything like capable of exterminating small-pox from the world, as was formerly maintained; but that it will, in a large proportion of cases, protect the system from variola, and that in those cases where it fails of this protection, it renders the disease a much milder one, no one will pretend

to deny. *The only question is, whether, as a whole,* it is of benefit *to mankind.* It is maintained that vaccination, while it affords a good degree of protection from variola, yet renders the system more liable to other diseases. It is affirmed also, that other diseases are introduced into the system at the same time with the cow-pox. Long-continued and troublesome skin diseases appear to follow it, and, in not a few cases, the child seems never to enjoy good health after it has been performed. I think any one who has any considerable practice among children in any great city, will be struck with the number of cases he will find of this kind by questioning parents on the subject. . . . . *Not only does vaccination cause subsequent unfavourable effects, but it sometimes endangers life at the time; and, in some instances, destroys the child. I have myself known most fearful convulsions to be brought on by it,* and that in children apparently of the firmest health."

Again he says:—

"I have been for years so much a disbeliever in vaccination, that I would not be willing to have it practised upon a child of my own. I did not, however, know that there was a high authority, even among the profession, for doubting the utility of the practice, till the year 1850-51. At this time, Professor Bartlett, a very candid and able man, and lecturer on the theory and practice of medicine in the University of New York, quoted, in his remarks on the causes of pulmonary consumption, on the authority of two French writers, Barthez and Rilliett, the following facts in regard to vaccination. In 208 children that had been vaccinated, 138 died of tubercular consumption, and 70 of other maladies. In 95 that were not vaccinated, 30 only died of tubercular consumption, and 65 of other diseases. The circumstances connected with the two classes, the vaccinated and the unvaccinated, were, as nearly as could be, the same. Professor Bartlett did not himself, in consideration of these facts, venture an opinion as to the propriety or nonpropriety of vaccination, but would simply be understood as referring to them as matters worthy of serious consideration."

The deduction from the facts stated by Drs. Barthez and Rilliett, according to the rules of common arithmetic, is, that in the 208 children, *the mortality from tubercular consumption was increased fourfold by vaccination.* Surely this fact, were there no other, should of itself arrest the anxious attention of every man, and constrain our legislators to pause and inquire. But the appeal seems irresistible when supported by the additional fact, that *this same dire foe* of the human race (consumption) has widely spread since the introduction of vaccination, and within ten years (ending 1853) has slain its 68,204 victims in the metropolis alone.

On the whole, Dr. Shew seems to regard vaccination as a game of chance for life or death, with the chances against the former. This gambling cannot be justified by any considerations, and it is absolutely diabolical to compel any one to be an unwilling player at such a hazard.

Another American medical author, Dr. Trall, also appears to regard vaccination as a game of chance. He says:—

"Physicians are not at all agreed as to the propriety of resorting to vaccination as a protection from smallpox. . . . There is no question that it is, to a great extent, a protection from the virulence and danger of the natural smallpox; at the same time there is danger of inoculating the patient with some loathsome, and even worse disease, as s——s, or scrofula, from the impossibility of always getting a supply of matter from healthy constitutions. In either way there is a risk to incur, and it is a delicate matter for a physician to advise on a subject, when both sides are hazardous. I am fully convinced, that, if people could bring up their children in strict physiological habits, the nonvaccinating plan would be altogether the best; but in a city, this seems next to impossible, and in the country it is pretty generally neglected. Children reared healthily in relation to food, exercise, and ventilation, have little to fear from any disease, however contagious; they may have this (smallpox), but it will not endanger life, nor produce much deformity nor serious injury. I have seen, within the last year, a most horribly loathsome case of scrofulous disease, in which the patient *literally rotted alive* at the age of fifteen, from *unhealthy virus,* received when he was but three years of age. Parents often find some of their children tainted with morbid humours, unlike any other member of the family, and which they are wholly unable to account for, except on the supposition of foul matter taken into the system by vaccination. My own practice would be to keep children as healthy as possible, and if the smallpox happen along, let it have its natural course. Those who have the means to do the same, I would advise to act accordingly; those who live, move, eat and drink after the ordinary manner, would have a better chance at times by resorting to vaccination."

(To be continued.)

On the Cultivation of Flowers in Windows.—There are fewer tests of a happy home within, than the flower-decorated window and neatly-kept garden; and there is no occupation for the leisure hours more calculated to keep it so, or to sooth the mind. It yields pleasure without surfeit; the more we advance, the more eager we become. And how unlike this to most of our worldly engagements! To those blessed with children, how delightful it is to bend their young minds to a pursuit so full of utility and intellectual instruction, combined with the advantages usually accompanying industry; and in children, carefulness and thought about their plants will lead to the same feelings respecting other matters.—*The Builder.*

GARDEN FLOWERS OF AUGUST.

"A drowsy indolence now hangs on all;
Each creature seeks some place of rest, some shelter
From the oppressive heat: silence prevails,
Nor low, nor bark, nor chirp of birds is heard;
In shady nooks the sheep and kine convene:
Within the narrow shadow of the cot
The sleepy dog lies stretched upon his side,
Nor heeds the footsteps of the passer by,
Or at the sound but raises half an eyelid,
Then gives a feeble growl and sleeps again:
No sound is heard but humming of the bee,
For she alone retires not from her labour,
Nor leaves a meadow flower unsought for gain."

JOANNA BAILLIE.

IF there is less variety in the flowers which during this month expand afresh, yet there is as great an amount of brilliant colouring in the garden, as in the prolific season of midsummer; for dahlias, sun-flowers, and amaranths, wear hues more deep and glowing than the rose or lily of June. A magnificent flower is the dahlia, and it is pleasant to think that its culture affords an innocent recreation to many a florist of humble life. The autumnal flower-shows in which it is exhibited, give evidence how wonderfully the skill of the florist has improved the stately flower, which, when it grows in its native land, is neither so bright nor so beautifully formed, as the blossom to be seen in the humblest garden. The dahlia grows wild on the sandy plain, as well as on the mountains of Mexico; and was introduced in Europe by the great naturalist Baron Humboldt. He, in the year 1789, sent it to Professor Cavanilles, of the Botanic Garden of Madrid, who in that year presented it to the Marchioness of Bute. This lady kept it in the greenhouse, and from this species *(dahlia variabilis)* nearly all the numerous varieties have been obtained. In the field of Mexico it is a single flower, not remarkable for the brightness of its purple or lilac tint, and growing to the height of about eight feet. Few flowers vary more in colour when under cultivation, and we have now the dark purple and richest puce, with every shade of scarlet, crimson, and pink; while the dahlia of pure white, or delicate yellow, grows beside others streaked with the variegated hues of the tulip or ranunculus; though that great desire of florists has not yet been fulfilled in any approach towards a blue dahlia, nor is it often of unmingled white. More than two hundred varieties have been raised from the seeds of the common purple flower.

In 1802, two other species of dahlia were added to that already in the garden. They were both procured from Mexican lands. The barren, rugged dahlia *(dahlia frustranea)*, and the scarlet flower *(dahlia coccinea)*, both, however, produce smaller blossoms and fewer varieties; and the variable dahlia, which was first brought into our land, is still the favourite flower of the florist. A species of recent introduction *(dahlia excelsa)*, called the tree dahlia, is said to attain, in Mexico, the height of thirty feet, with a stem proportionably thick.

The Mexicans boil and eat the tuberous roots of the dahlia; but even could we spare them for such a purpose, they are not palatable to European taste.

A handsome American plant is now equally conspicuous on the parterre. This is the tall and brilliant sunflower *(helianthus annuus)*, which is a native flower of Peru and Mexico, as well as Canada, and several other parts of North America. In the Canadian woods it grows to a great height, and the blossom is as large as a dinner plate. On the prairies, Catlin observes of it, that it often taunted them by striking against their faces, as they made their weary way through the tall grass. Dr. E. D. Clarke also saw it in abundance on the steppes of Tahtary, growing very tall and large. The ancient Peruvians, when found on their native plains by the Spaniards, were worshippers of the great natural light of day. They had their temple of the sun, and the maidens who officiated in the service of their god, were crowned with wreaths of sunflowers, made of purest gold, while they wore on their breasts similar emblems of the idol of their worship. The holier faith professed by their conquerors, as yet was not accompanied by that spirit of love, and truth, and justice, which we who read our Bibles know to be its sure fruit, but which in times of papal darkness was understood but by a few; and the sight of these golden ornaments, while they aroused their hatred of idolatry, appealed but too surely to their covet-

ousness. And when, at a later season, the Spaniards saw the fields bright with the same golden hue, and observed these magnificent flowers on hill and valley, by wood and river side, Peru must have seemed to them a land of glowing gold.

The seeds of the sunflower are recommended as an excellent food for cattle, and the settler in the woods of Canada gathers and stores them for a winter supply for his poultry. In the United States the flower is cultivated to a great extent for the oil procured from its seeds, which is as good as Florence oil. The whole plant, and especially the golden blossom, exudes a thin, clear, resinous substance, the strong odour of which resembles that of Venice turpentine. The sunflower is not found wild in any part of southern Europe, but in Asia and Africa a few species are to be met with. Several double varieties are cultivated in the garden.

The numerous clusters of the garden hydrangea *(hydrangea hortensia)* bloom in the autumnal season. This flower is often called the Chinese guelder rose, as it is much cultivated in the gardens of China, as well as in those of Japan, but its native place of growth is unknown. The flowers are usually of a pale rose colour, but are sometimes blue. Great pains have been taken by cultivators to discover under what conditions of the soil the blue colour may be insured. The yellow loam of Hampstead heath will produce it, as does also the peat of the bogs near Edinburgh, and the soil in the neighbourhoods of Berlin and of St. Petersburg. Water impregnated with alum, steel finings, carbonate of soda, or common salt, has been known to give the blue to the hydrangea; but on no one of these can any certain dependence be placed. Inglis says that this tinge is very general in the flowers of this plant in the isle of Jersey. The hydrangea is there seen growing as a shrub at every cottage door, or in one of those gardens which are always planted by the houses of that island. It is often twelve feet in circumference and five in height, and is tall and branching enough to form a shade, under which one might find shelter from the sun of August. "These beautiful shrubs," says Inglis, "here almost as trees, form the avenues in the neighbourhood; and at the season in which they are covered with their large blue flowers, the effect is indeed most captivating. I have nowhere seen the hydrangea so luxuriant in growth as in the Channel Islands, and the flowers are most commonly blue, not pink, as we are accustomed to see them in England."

As the different flowers, called everlasting flowers, bloom during this and the two following months, they may here be noticed together. The yellow flower, called love everlasting, has been long known to botanists as the Eastern everlasting *(gnaphalium orientale)*, but it is now very generally included in the genus *helichrysum*. It grows wild in abundance on some of the mountains of Asia, and the pilgrims who visit the flowery Carmel, and the lofty Lebanon, gather it from their sunny slopes, as memorials of their pilgrimage. Another kind which has been introduced into England, the blood everlasting *(gnaphalium sanguineum)*, is generally gathered by those who, when treading the Mount of Olives, wish to carry thence some record of a visit to so sacred a spot; and the durable nature of the chaffy petals of the lowly floweret, render it a very suitable one. Few flowers, indeed, preserve their beauty like this, when brought from a warmer climate; and to those blossoms the description of the poet is applicable—

"They look as infants do, who smile when dead."

A species of cudweed grows in great profusion on the steppes of Tahtary, and the Cossacks drink an infusion of its yellow flowers as a cure for the jaundice.

The brilliant everlasting flowers, which, as they have no English name, we must call by their botanic one of *helichrysum*, are so named from two Greek words signifying sun and gold. They are chiefly natives of Africa, especially of the southern parts of that continent. The handsomest, as well as the hardiest kind, is the waved-leaved species *(helichrysum bracteatum)*, which grows wild in New Holland. This has yellow flowers. Some species are white, and one beautiful kind has its flowers tipped with pink, and is brought from the colony of the Swan River. Backhouse writes thus of one species, which he saw at Cape colony: "In the

course of the day I walked to the top of a hill, on which the *helichrysum proliferum*, a beautiful crimson everlasting, was growing in profusion among low rocks and ferruginous sandstone. The plants were about the size of gooseberry-bushes, covered with flowers, and as fine as I ever saw them, when highly cultivated, in an English greenhouse. This is not generally the case with wild shrubs; they are broken by storms and cattle, and overgrown one by another, in the situations where they grow naturally; but when cultivated, they are carefully protected from injury."

Another genus of flowers called purple everlasting, and whose blossoms retain their beauty for many years, are the xeranthemums. They are popular annuals, and their Greek name signifies dry-flower. There are but few species, and all are natives of southern Europe. They are purple, red, or white, and one is yellow. Some of the species are small shrubs. The flowers of all these kinds of everlasting, when mingled together, form a beautiful and permanent bouquet for the winter season.

A flower which is equally well entitled to the name of everlasting, is the globe amaranth *(gomphrena globosa)*. Milton has immortalised this lovely flower in his Paradise Lost, where he describes it as encircling the brows of angels—

> "To the ground,
> In solemn adoration, down they cast
> Their crowns, inwove with amaranth and gold,
> Immortal amaranth, a flower which once
> In Paradise fast by the Tree of Life
> Began to bloom."

Nor is the mention of the amaranthine wreath peculiar to our great poet. Homer had long before told how, at the burial of Achilles, the Thessalians wore it in honour of the warrior, and it appears to have been often worn at funerals, in the early ages of Greece. In Sumatra, where this flower grows wild, its purple globes, which seem as if sprinkled with gold, are worn as garlands around the head; and both in Portugal and in Paris, these flowers are mingled with the wreaths made to deck the shrine of the saint, or the tomb of the dead. In the former country, churches are adorned with this flower, and the French term it *violette immortelle*. The plant, though separated by modern botanists from the amaranth genus, is very nearly allied to it.

A large number of amaranths are cultivated in this country, one of the most common of which, is the flower called love-lies-bleeding *(amaranthus caudatus)*, the flower gentle of the old writers. It was known to Gerarde by this name, and also by that of florimor. He says of it, "It has exceeded any skill of mine to describe the excellency and beauty of this rare flower." It has variegated leaves. It grows wild in Persia, China, and India.

The prince's feather *(amaranthus hypochondriacus)*, with its long, velvet, plume-like flowers, is equally common, and blooms also at this season; and the three-coloured amaranth, which blooms from June to September, and is called by the French *fleur de jalousie*, is a very pretty species. It is a native of the East Indies, and was known to the old English gardener by the name of *passevelours*. The leaves of some species are eaten, and the foliage of several is boiled as spinach, in the East Indies.

The coxcomb amaranths are very curious flowers, and notwithstanding a certain formality of appearance, are much prized for the deep purple or red of their silky or velvet blossoms. The crested amaranth *(celosia cristata)* is a native of many parts of Asia, and is said by Thunberg to be cultivated to such perfection in Japan, as that the heads of flowers are often a foot long, and of equal breadth. There are many varieties of this amaranth, and the scarlet species are extremely beautiful. Several are natives of China.

The strawberry blite, or Indian spinach, is now red with its juicy fruits, by which it is known to us, rather than by its less conspicuous greenish flowers, which bloom in April. These fruits are something similar to our wood strawberries, but are neither so handsome nor so palatable. Their juice flows very freely, often staining with its deep red the hand which touches them; and the juice was formerly used by cooks in colouring puddings. The berry-headed species *(blitum capitatum)* is the most ornamental; it is a native plant of southern Europe. There are three species in our gardens; they are

commonly called strawberry spinach. Their name, blitum, taken from the Greek, and signifying fit only to be thrown away, would suggest the thought that they were not ornamental, yet their berries render them so in a good degree; nor is their handsome spinach-like foliage unworthy of admiration. The crimson berries are covered, like those of the strawberry, with small seeds.

The strawberry blite is one of the greatest ornaments of the summer woods of Canada, and it grows in great profusion in those forests, where

"The hickory, the sumach, and the red maple,
The fringe-tree, and the acacia triple-thorned,
Temper the ardour of the burning sun,
And on the locust's violet-breathing flowers
Cast the pale yellow of its meekened fire."

The author of the "Backwoods of Canada" mentions having gathered branches a foot in length, thickly studded with its crimson berries, and regrets that the beautiful fruit should, by its insipidity, be unfit for eating: she adds, that on the banks of creeks and in rich ground it grows luxuriantly, "sending up twenty or thirty branches, drooping with the weight of their magnificent burden. As the middle and superior stems ripen and decay, the lateral ones come on, presenting a succession of fruit, from July till the frosts nip them off, in September."

The Canadian Indians are said to be fond of these unpalatable berries, and they use the juice as a dye, and make it into ink. The writer before quoted, states, however, that this ink is liable to fade unless mixed with alum. She mentions the circumstance of a lady, who sent a letter from Canada, crossed with the red ink made from the juice of this plant, without having first taken the precaution of fixing it with alum. The epistle from the far country reached its destination, but the ink had faded, and the writing become illegible; and the friend who had anxiously longed for the intelligence which it was to convey, had to wait some months before a more permanent liquid should record the good news, which the Scripture has described as in its effects like cold water to a thirsty soul.

The tribe of rudbeckia are annuals of great beauty, but their large size excludes them from the smaller gardens. This is exclusively a North-American genus. They have all starry blossoms, and are yellow or purple. The purple rudbeckia *(rudbeckia purpurea)*, which was known to our gardeners as early as 1699, and is very hardy, is a singular-looking flower. Phillips observes of it, that its petals being pendulous, and curling inwards, have the appearance of so many pieces of narrow ribbon, notched at the end. The colour of this flower is of a purplish-crimson. One or two of the species are fragrant. This genus was named in honour of Rudbeck, an enthusiastic botanist of Sweden, who, having just completed a work entitled "The Elysian Fields," was so distressed at witnessing the destruction by fire of this cherished production of his mind, that he died of grief, in 1702. During his last days, however, his son laboured diligently to re-write this work, and it was published in the course of the year of his death, and that which preceded it.

If we were to go now into the fields, we should see the milfoil, or yarrow, scattered in plenty over their grassy surface, and the garden yarrows are blooming too on the border. They are a vigorous family, with yellow, red, or white flowers, the ornaments of the pasture lands of southern Europe. One of the prettiest kinds, which is also one of the most general, is the woolly milfoil *(achillea tomentosa)*, which has pale yellow flowers, and blooms from May to October. The red-flowered kind *(achillea tanacetifolia)* is also a pretty flower, and grows on the Swiss mountains; while the double variety of our wild milfoil is no less ornamental. The musk-scented yarrow is the *genipi* of the Swiss, who use the plant medicinally; while the herdsmen of the hills value it much for their cattle. The Laplanders and Finns mix some species of yarrow with their tobacco, for smoking. The golden yarrow of our gardens, which is not more than six inches high, and has an abundance of rich yellow clusters, is a beautiful plant for the edging of a border.

The sweet-scented golden rod *(solidago odora)* is another of the few fragrant flowers which we find in the garden at this season. The odour is diffused from

the leaves, and is compared to the mingled scents of sassafras and anise. It is often planted in the garden or shrubberies, and is sometimes called Aaron's rod.

(To be continued.)

CORRESPONDENCE.

To Dr. Coffin.—Dear Sir,—You would favour me by inserting in the *Botanical Journal* the two accompanying statements of cures. I had mislaid them, or I would have sent them before.

I remain, yours respectfully,

J. Brockies.

Northgate-street, Hartlepool, July 15th, 1855.

To Dr. Coffin.—Dear Sir,—I have lately been suffering from the cold chills and fever, which turned to the fever and ague, but got no relief from the doctors. I heard of your Agent, Mr. Brockies. I was only a fortnight under his treatment, and am perfectly restored to health, and cured. If cayenne or fever and ague-powder will poison any person, I have had plenty of it. I think it nothing but proper that all such cures ought to be published for the good of others. If ever anything happens to me again, I shall always apply to your valuable medicines.

I remain, your humble servant,

Henry Yeoman Seaman.

Skinner-street, Whitby, 22nd April, 1855.

To Dr. Coffin.—Sir,—Having had the yellow jaundice, and trying every remedy from the faculty, but to no use, I heard of your Agent, Mr. Brockies, of Northgate-street, Hartlepool, who made a complete cure of me in a fortnight. I wish to have this published for the benefit of others.

I remain, your humble servant,

Samuel Crayner,

Baxtergate, Whitby, Yorkshire, July 12th, 1855.

VARIETIES.

There is no limit to the aspiration and expansion of the human mind; it has reached no point beyond which it cannot go; and some daring genius will make long voyages of discovery on the ocean of the unknown, till, Columbus-like, he finds the new continent so much desired and needed as the birth-place and home of a new order of things which shall shed a benign and peaceful influence over the world.

Minerals that we Eat.—There is one mineral beyond all others essential to life. If we may be permitted to recal the very common phrase by which man is said to be a brick, we would indicate the propriety of speaking of phosphate of lime as the mortar which completes the edifice. The phosphate of lime cements and stiffens the gelatine of the bones. It is the so-called bone-earth to which the bones owe their stiffness and solidity. It is the phosphate of lime which renders them capable of supporting the weight of the body, protecting the delicate organs of life, and serving as levers on which the muscles may act. Phosphate of lime reaches us in all flesh, and in most articles of vegetable food, but especially in some of the cereals. A striking illustration of the value of the phosphate of lime, as a constituent of our dietary, may be found in the fact, that nearly all the nations of the earth feed either on wheat or rye, or on barley or oats, and these grains appear to be specially adapted for human use, by reason of the large quantities of phosphate of lime which they contain.—*Household Words.*

The Medical Profession at Herat.—The Sertip's visit was followed by those of several men of rank; after them came the *Hakim bashee*, doctors, who hold a high rank in the society of Herat. Amongst them were Mirza Asker, Mirza Mahommed Hussein, Goolam Kader Khan, and Agha Hussein, the ancient adviser of the Shah Kamram. As in their eyes every European must be a doctor, the conversation never ceased running on the healing art, of which they considered themselves such distinguished professors, each in turn was anxious to give me an high opinion of his talent, and I was condemned to listen to a long and absurd display of Affghan erudition. They also brought with them some of their drugs, in order that I might give them some notion of the manner in which certain chemical preparations which they had received from British India should be employed, as they were ignorant of their effects. They had, they said, up to that time given these medicines in progressive doses, until they ascertained the cases to which they were applicable. How many of their unfortunate patients had been killed by this system I dare not ask; but Mirza Asker filled up the blank by pulling from his pocket a bottle of the cyanate of mercury, requesting to know what salt this could be? "It has been of no use to me," he added, "for of one hundred patients that I have given it to only one was cured—all the rest died."—*Ferrier's Journeys in Persia, &c.*

NOTICE.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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STATISTICS OF DISEASE AND CURE.

The British Association for the promotion of science has just held its meetings at Cheltenham. Lord Stanley read an excellent paper on statistics generally; but our object in writing this paper is to call the attention of our readers to the application of statistics to Botanic Science and its medicinal benefits. Frequently as the subject of medical reform has been before the House of Commons, the questions connected with it have been involved in doubt and perplexity, because there has been no medical statician who would keep a record of the number of patients recovering and the number dying under the treatment of hydropathy, of homœopathy, and of Medical Botany. By this process, facts might be put in array against all the talk of a monopolising party, and the country would be prepared to give a verdict in favour of that system which was accompanied by the highest amount of curative evidence. Medical Botany has nothing to fear, but everything to hope for, by such a process. This, however true, is a gratuitous and unsupported assertion, so long as it is unsustained by statistical evidence. The evidence, to be complete, and to be sufficient to convince the greatest sceptic, must not only contain a list of all the cases which have been successfully treated by Botanic Medicine, but all other cases of similar diseases, with the results of the treatment by other medical systems; and then, with the accuracy of a mathematical demonstration, the comparative merits of each system might be clearly and satisfactorily ascertained. Statistics are not conclusions, but they are the *data* from which conclusions can be drawn. We have again and again advised all the Agents of Medical Botany to keep register sheets, and to record all the cases of disease and recovery which come under their notice, and at the same time to record any cases of failure and death; in one word, to keep a faithful account of every patient, his habits, age, previous medical treatment, and all other information which can be obtained. Documents of this kind should be prepared in every village, town and city throughout the United Kingdom, not only by Medical Botanists, but by allopaths, hydropaths, and homœopaths. By this means material would be provided for some skilful statician to analyse, calculate and compare, and then work out the problem, what medical system is worthy of the highest amount of public confidence because of its greatest efficiency?

Hitherto we have had statistics of population, of education, of penal inflictions and of mortality—the latter being carried so far as to give the average amount of mortality in different trades and handicraft businesses; but we have never yet had a full and clear statement of the number of those who have recovered or died under the different systems of medical treatment, so that an average could be struck, and the value of any one given system be determined in preference to any of the others. In connection with the monopolising and government-patronised medical sect, there are numerous learned societies in which papers on every department of medical science are read,

and sometimes these papers assume a statistical character, as they give the number of deaths during the ravages of some epidemic or endemic, though mostly the distinctive methods of treatment and their results are in such papers carefully avoided. This may be a prudent course, as it might damage the craft, if the sorry results were ascertained and materials were furnished by which the thinking public would be able to arrive at conclusions by no means flattering to the monopolising allopaths. But in searching after truth, all partiality must be laid aside. Numbers or figures are inflexible and faithful witnesses; they will not yield to favoritism to flatter, nor will they be bribed to deviate from the pure, naked truth; and philosophers have taught, and experience has confirmed their teaching, that there is no way of arriving at truth so certainly and so satisfactorily, as by collecting a number of facts illustrating the working of any given principles, and thus, by the aid of things known and proved, reaching things before unknown or doubtful. The process proposed is one that is fair to all parties; the one system which possesses most merit will become better known and more extensively available, and those systems which are worthless will meet with the censure and fall into the disuse they deserve. Medical Botany has been ridiculed by some, abused and persecuted by others, and yet the advocates of this system invite investigation and challenge all other systems to this one simple test—that of statistical examination. Take any given period—the time of the cholera—obtain all the facts of the cases relating to that disease in a given district to which the agents of all medical systems had access, present a faithful record of deaths and recoveries, and from this *data* shew the conclusion, the result; and Medical Botany, Dr. Coffin, and all his adherents, will be quite satisfied to abide the issue.

COMPULSORY VACCINATION.

In the last number of this Journal, we gave our views on the subject of vaccination generally, and introduced some extracts from an excellent pamphlet on the subject, by John Gibbs, Esq. The subject is so ably handled by this writer, and the evidence adduced from accredited sources is so satisfactory and weighty, that we shall continue to furnish our readers with some of Mr. Gibbs's valuable remarks upon this important topic. He thus informs his readers—

Dr. Schiefferdecker, an American author, is decided in his opinions. He says:—

"Vaccination was, undoubtedly, an excellent expedient against the awful and merciless ravages of this disease (smallpox); but it is now, after Priessnitz's discovery of the use of cold water in curing disease, not only unnecessary, but even a great wrong, because it is insufficient as a preventive means, and a cause of many diseases which would have been avoided if vaccination had not taken place, as the hidden disease of one individual is often transferred by vaccination to the vaccinated one. The truth of this assertion is proved by daily experience; *thus I have seen a perfectly healthy young girl, born of healthy parents, soon after vaccination, infected with a skin disease, of which the parents of the child, who seemed very healthy, and from whom the vaccine matter was taken, secretly suffered, as afterwards was ascertained.*"

Demurring only to the inaccurate prefix "cold," I cannot withhold my testimony in corroboration of Dr. Schiefferdecker's assertion of the efficacy of water, in the hands of the late Vinzenz Priessnitz, in the treatment of smallpox. When I was at Græfenberg there were at one time thirteen smallpox patients, of different ages, from childhood to middle age, under treatment by the water-cure. Some of the cases were light, some confluent and severe. *All the patients recovered*, not one of them was marked. Here, then, is a subject deserving the attention of our rulers, if they be sincerely desirous to disarm smallpox of its terrors.

Dr. Hering, another American author, is a firm believer in vaccination, and appeals to the practice thereof as "offering one of the most conclusive proofs of the truth of the homœopathic law;" but confesses, "It is a matter of great importance to obtain the virus from a healthy child; one that is free from scrofulous taint, and all other hereditary, and especially cutaneous diseases."

The Swedish doctor Liedbeck says:—

"I leave it undecided whether the vaccination of Jenner be attended with more good than evil; in my own family, I have seen both. We have known scurf and ulcers, in healthy children, to be the immediate result of vaccination, as well as eruptions and itch to be removed [? suppressed,

J. G.] by the same."—*British Journal of Homœopathy*, No. 30, p. 479.

Let us next inquire of a few English medical authors:—

Dr. Chapman (a homœopath), in recording a case of eczema resulting from vaccination, says (*British Journal of Homœopathy*, No. 29):—

"It may be here observed that chronic diseases may be often traced back to the period of vaccination, in such a way as to show that the virus was communicated in that way."

Dr. Newman, an author favourable to vaccination, frankly admits:—

"It is of the utmost consequence that the child from whom the infectious matter is communicated be perfectly healthy, and have no inherent taint of constitution; for experience has taught us that the most terrible disorders have been communicated to healthy children from being vaccinated with lymph contaminated with s——s, herpes, scrofula, &c., which injurious consequences might have been prevented by taking proper precaution that the matter was pure and unvitiated."

The medical Editor of the *Botanic Record* observes:—

"I may say, in fact, that long experience with disease, in its most horrible forms, has taught me that this vaccine delusion is a most prolific source of glandular disease, secondary s——s, scrofula, &c., and that the sooner it is dispensed with the better it will be for humanity."

Two medical gentlemen, members of the House of Commons, are reported as having borne similar testimony in their places in the House:—

"He was opposed to it (compulsory vaccination) on constitutional grounds, as no parents ought to be compelled to have their children vaccinated. *He denied that vaccination was any preventive of smallpox, and (affirmed that it) was often the cause of blindness and scrofula.*" Speech of Mr. W. Michell (M.D., M.R.C.S.L.), in the debate in the Commons, July 18, 1854, on the Compulsory Vaccination Act Amendment Bill.—*Medical Circular*, July 26, 1854.

"Mr. Brady stated that the (Compulsory Vaccination) Act had proved to be an admitted failure. At the present time the operator had not the means of knowing with certainty whether what he used was the true vaccine lymph; and *many cases had come within his (the hon. member's) knowledge, in which children had imbibed loathsome, and even mortal diseases, from having been inoculated from unhealthy persons.*" Discussion in the Commons, May 7, 1855, on the annual vote of £2000 to the National Vaccine Institution.—*Daily News*, May 8, 1855.

Mr. W. H. Borham, an allopath, who is not only a zealous but likewise a compulsory vaccinator, published in the *Lancet* of July 29, 1854, a letter addressed to another compulsory vaccinator—the distinguished author of the "Compulsory Vaccination Act"—in which he says:—

"I think, my lord, that every medical man ought to vaccinate those children that he has brought into the world, for many obvious reasons—it would make the object more complete. He can do so by your recent amendment; but the slight remuneration of one shilling will deter many from accepting it, and thus it will rather tend to the dissemination of other diseases *equally or more frightful than the smallpox*. To make this clear to you, I will illustrate it by cases that have fallen under my own observation, and *these are legion*—viz., many children are born apparently healthy, and seemingly remain so for two or three months, when an eruption breaks out upon the region of the a—s, precluded from observation by the apparel, but the face and arms appear quite healthy. The district vaccinator is deceived by the appearances of these children; they are vaccinated, fine pustules are produced, and *this vitiated virus is transmitted to scores of others*, who shortly after suffer from fulsome eruptions, or *the foundation is laid for scrofula or tuberculous consumption*. These children have been born of parents who were either suffering from primary or secondary s——s [it is a curious fact that 'half the deaths registered from this disease were in children under one year' (*Lancet*, March 17, 1855); and it is worthy of note that in many cases the disease was derived solely from the father, the mother never having been afflicted with it.—J. G.] during uterogestation; and this frightful disease, after the birth of the child, either lies dormant, or slightly shows itself about the third month, the time for vaccination. Such diseases are likely to be known by the medical attendant of the family, and I humbly submit it as a strong reason for the remunerating fee to be sufficiently large to induce him to vaccinate those he attends, so that such diseases may have *less chance* of being propagated."

Why the "district vaccinator" should be liable to be deceived any more than "the medical attendant of the family," is not apparent. The fact is, that no surgeon or physician can be sure that any given lymph is unmixed with the seeds of some other disease besides those of cowpox. There is no known medical test by which any human being can be pronounced free from the taint of some transmitted malady. What practitioner can positively assert that any given child is free from hereditary disease? Where is concealed the seed of scrofula, consumption, insanity, or other hereditary malady, for two or more generations, finally to break forth? What test is there to detect its presence? Can any practitioner pretend to the knowledge of such a test? Can the lymph be traced through

some ten or twenty transmissions? Even if it could, if we adopt the opinion of Mr. E. Wilson, that every case of skin disease has its source in hereditary taint from the most horrible of all diseases, what lymph can be pronounced free?

The following extract forcibly illustrates the utter impossibility of deciding who does or does not carry within him the lurking seeds of some hereditary malady:

"The doctrine of lineal consanguinity is sufficiently plain and obvious; but it is, at the first view, astonishing to consider the number of lineal ancestors which every man has, within no very great number of degrees; and so many different bloods is a man said to contain in his veins as he hath lineal ancestors. Of those he has two in the first ascending degree, his own parents; he hath four in the second, the parents of his father and the parents of his mother; he hath eight in the third, the parents of his two grandfathers and two grandmothers; and by the same rule of progression, he hath an hundred and twenty-eight in the seventh; a thousand and twenty-four in the tenth; and at the twentieth degree, or at the distance of twenty generations, every man hath above a million of ancestors, as common arithmetic will demonstrate."—*Blackstone, Com.* b. ii, chap. 14.

It is asserted that from children apparently the most healthy, diseases the most horrible have been propagated in and by the vaccine virus. A gentleman, well known in the philanthropic world, informs me that, with lymph taken from a child supposed to be perfectly healthy, his grandchild, a healthy child of healthy parents, was vaccinated; from this child the virus was transferred to his cousin, another healthy child, the offspring also of healthy parents. Subsequently both children became afflicted with a loathsome disease, prior to the outward manifestation of which some twenty other children were vaccinated from them.

Dr. Laurie, of Dunstable, who kindly allows me to mention his name, thus writes to me:—

"I vaccinated a child with pure lymph (reputed to be) from the Royal Vaccine Institution. The child, though previously apparently healthy, has ever since been nearly blind; opacities of the cornea developing themselves immediately after the operation. This case, and several others from other vaccinators, at Edlesborough, where it was performed, have militated very much against the practice of vaccination amongst the poor."

It would lengthen this paper too much to give other similar testimonies.

Occasionally some unreflecting person may hastily assert, without assigning any reason, that it is impossible that two poisons can be deposited together in the vaccine vesicle. Why impossible? If two distinct poisons can circulate together in the blood, why is it impossible that they should be deposited together in the same exudation therefrom? If they preserve their distinctive properties in the blood, why not in the lymph? Should it be said that the one overcomes the other—that, for example, cow-pox masters scrofula—the cause of vaccination gains nothing by the argument, for the result must be the formation of a third something, which is neither cow-pox nor scrofula, and which cannot be innocuous, when transmitted to the circulation of another human being.

Another reason why vaccination sometimes proves injurious, and even immediately fatal, is said to be the use of "*decomposed" lymph* (*Lancet*, April 14, 1853). *But is it not possible for even the "purest" lymph to destroy health and life?* It is stated amongst the arguments against small-pox inoculation, that it is frequently followed by dire sequela, scrofula, blindness, &c. Now, as cow-pox and small-pox are identical (according to such high authorities as Drs. Ceely, Badcock, &c.), or cognate (according to others), why should not the one be as liable as the other to the same train of consequences? *May not, therefore, the evil results often attributed to a mixed virus, be due, in reality, in many instances, to the pernicious operation of the genuine vaccine lymph itself?*

By way of obviating all evil consequences, it has been proposed to take the vaccine lymph, in every instance, direct from the cow. But the constitutional disturbance would be greater; the liability to erysipelas, gangrene, and convulsions the same; and the risk of *scrofula* no less—"kine as well as swine being subject" to that disease.

It is difficult to believe that the "physical condition" of a *diseased brute* "is even purer than that of a human being" in the *normal state.* Does even a compulsory vaccinator labour under the delusion that the *vaccine virus* can be obtained from the cow *when in a state of health?* Does he hold that it is best

communicated to the human being when in a *state of disease?* As to whether there be anything "repulsive" in *transferring corruption from a diseased animal* into the circulation of a *healthy* human being, that is quite a matter of taste.

The expectation of a contingent good cannot justify the risk of importing into a family any of those dread evils above enumerated, or reliance in the judgment of any man, much less of one, according to the *Lancet*, wholly without instruction, practical or theoretical, on the subject upon which the law empowers him peremptorily to decide. How, then, can any justification be pleaded for forcing upon others so dangerous a gift as vaccination, and, at the same time, outraging, in the most grievous manner, their best affections, natural rights, reasonable convictions, and religious scruples?

When medical authors, regularly educated, make such admissions as those quoted above, is it to be wondered at, that thinking men should recoil with horror from the very idea of vaccination, and conscientiously decline to jeopardise the health and lives of their offspring by the adoption of a *deceitful, disgusting, and unnatural practice*—a practice alike debasing to man and dishonouring to God? Is it not rather to be wondered at that any man professing Christianity should not only yield himself captive, mentally and bodily, to as mischievous a delusion as ever enthralled the human intellect, but that, failing in argument to disseminate his opinions, he should seek by force to propagate his obnoxious practice?

Apart from all considerations of the liberty of the subject, such authoritative statements should teach human lawgivers modesty, and make them shrink from legislating upon such perilously dark and ambiguous questions. Nay, to compel vaccination in the face of such statements is to incur the guilt of atrocious cruelty. Will it be said that they are undeserving of attention? They are the statements of medical men; of men much more likely to be biased, by their professional education, in favour of vaccination than against it; and that is sufficient to justify the suspicions of laymen, especially corroborated as these express testimonies are, by the oft-repeated injunction of medical writers, to be careful to choose lymph from a *healthy* subject. But whilst the injunction confesses the danger, of what use is it as a safeguard?

(To be continued.)

DRINK AND DISEASE.

"Do you see that wreck?" said a friend to us, a few weeks ago, as an invalid was wheeled past in his chair. It was indeed a wreck. He had been a captain of a large merchant vessel, and most successful as such, but had freely taken his grog. Not very long before he had been boasting of this, and of his never having been a bit the worse for it. But that drink had been telling on him. Within a short time of our seeing him in his invalid chair, he had been struck twice with paralysis. Since then a third stroke has sent him to his grave. No one doubts that drink did it. This case has set us a thinking of the vast extent to which drink is the cause of disease and death; and as we have thought over it, and remembered what has come under our own notice, or recalled to our recollection the statements of others, we have had a conviction as to the fact which it were vain for us to attempt to convey to our readers in the short space to which we must confine ourselves. Something, however, we may say; and if we say little which is not already known to those acquainted with the physiological bearings of the temperance movement, it is not so much for these we write, as for those who have given little or no attention to the subject. Yet even those most acquainted with it will be none the worse to have their attention anew called to it.

It is generally granted that it is a bad thing to drink hard—that a drunkard does induce disease by his drinking, and often brings himself to the grave. Cases are so frequent, and so glaring, that he would be counted a fool who should deny the fact. But it will not be so generally allowed, that persons in the daily use of intoxicating drinks, using them in what is by many called moderation, are thereby injuring their health and shortening their lives. Yet that is what many of our most eminent medical men know, and acknowledge to be the case. The most

correct physiological investigation, and the most undoubted facts, go decidedly to prove it. It was drink that did the mischief in the drunkard; and in the person who never becomes a drunkard, but habitually uses it, the same effects, to some extent, may naturally be looked for. The objector says—"No, it was the abuse of the drink that brought the disease upon the drunkard—the right use of it will do no harm to any one." We at once allow that the drink may have effects upon the drunkard which it has not upon the habitual moderate drinker, and that in its action, in certain circumstances, it may be more sudden and powerful; but intoxicating drink has in it that of which it is not a right thing for any person in health to partake. We refer to the intoxicating principle—alcohol—which is universally admitted to be in itself an *acrid, narcotic poison*. Let the person who can carry most of drink as it is sold in our spirit-shops, &c., take unmixed, as in spirits of wine, a little of that which gives it its intoxicating power, and it would act at once as a virulent poison, and would kill him. But the thing is not altered by being diluted; and it is only diluted in intoxicating drinks, whether ardent spirits, clear as crystal, or the coloured and flavoured brandy or gin—whether wine from the real juice of the grape, or something so called, innocent of any connexion with the fruit of the vine—whether heavy stout or light ale. In none of these is there a chemical combination; for, from any of them it may be extracted by the application of heat, as in simple distillation. That which is a poison in itself, is a poison when merely diluted, and must have a poisonous effect.

And such we shall find it has. Let us look to the stomach—the great laboratory in which the food is prepared for the body. The effect of alcohol upon it is injurious. Of course we speak of persons in health. We do not deny that alcohol may be useful as a medicine, but we believe it will be found in many cases to be far less valuable, as such, and especially in reference to unhealthy stomachs, than is generally supposed. What follows will tend to show how. The experiments of Dr. Beaumont upon the stomach of Alexis St. Martin are well known. The opening left in the stomach, in the process of healing the gun-shot wound, gave the greatest facilities for observation; and the result proved that the free use of alcoholic liquors, and especially such a use of them for a few days, was followed by irritation and inflammation of the mucous coat of the stomach, and by other effects, such as the introduction of any poison of a similar character would produce. It was natural that so it should be. The burning, acrid, inflammatory effect of spirits is felt in the mouth and throat, and necessarily must be also in the stomach. Not unfrequently, when the stomach has been examined after death, evidence of this inflammatory action has been found, and that in the case of those who, while in the daily use of intoxicating drinks, had never been regarded as drunkards, or other than moderate, sober people. An inflamed stomach cannot be a healthy one, and cannot be fit for its proper duties. The process of digestion does not go on rightly, and a number of evils, to a greater or less degree, is the consequence. Some, indeed, affirm, that a glass of beer or spirits tends to aid digestion: they take it for that purpose. We should like these to explain to us how it is that alcohol, which in a glass vessel will preserve a piece of flesh from decay, from its being an antiseptic, can help to dissolve or digest that same flesh in the stomach. The only way in which alcohol can in any degree aid in digestion is by stimulating the stomach to pour in more gastric juice than otherwise it would do. But is there anything thereby gained? Is there not rather a decided loss? for the stomach, which in health would do its duty unaided, comes to require, as the result of the stimulation, that it be again stimulated. And it must not be forgotten, that while the alcohol may cause the temporary flow of gastric juice to be greater, its tendency is to precipitate the albuminous particles of food, and thus to do more evil than it has done good; while, should there be a greater quantity of food digested, the excess of nourishment becomes itself an evil, when thrown into the circulation. The person who is in the daily habit of imbibing alcoholic liquors, of whatever kind, cannot have a healthy stomach; and if the stomach be not healthy, there is an

evil at the fountain head, which must tell throughout the whole system.

And while the alcohol thus interferes with the digestion of the food in the stomach, it remains itself undigested, being simply absorbed, and is sent as alcohol through the body. This is proved from the alcoholic odour of the breath, and from its having been found unaltered in the blood, in the substance of the brain, in the walls of the bloodvessels, and elsewhere throughout the body. Circulating thus with the blood, it has various effects. One of these is directly on the walls of the bloodvessels, through which it is carried, producing irritation or inflammation. Another and a more striking result is in changing these tissues altogether, by what is known professionally by the name of *the fatty degeneration*. The walls of the bloodvessels and the contractile muscular fibre are changed into a fatty substance, so that the vessels cannot bear the pressure of the blood, and the contractile muscular substance cannot contract with a force sufficient to propel the contents. This condition is produced in something of the following way:—There is a perpetual removal of tissue which has served its purpose, in order to make room for new tissue. Instead of all this old matter being turned at once into substance such as could be thrown off in excretions, a portion of it is converted into fat, which is employed partly as fuel to keep up the heat of the body. Now the way in which the fat is used in keeping up this heat, is by being brought in contact with the oxygen of the atmosphere, by aeration in the lungs. The result is a chemical compound called carbonic acid gas, which is exhaled. But alcohol has a greater affinity for oxygen than this fatty matter has; and coming in contact with the oxygen, it appropriates it to itself, so that the fatty matter is thrown back into the circulation. The blood, being surcharged with it, is unable to take up what it otherwise would from the tissues, and instead of giving the right proportion of proper muscular matter to build up the walls, it can supply but what it has, and fatty matter is deposited. The result is, that often the substance that appears to the eye as muscular, is found, when examined by the microscope, to be made up of this fatty deposit. Hence there is enlargement of the heart or of the liver; and the substance of these is of a soft, flabby character, incapable of the propulsion of the fluids, and unable to retain them in their proper ducts. This fatty degeneration is not confined, of course, to those organs we have named; but wherever there is a bloodvessel, there, more or less, the process goes on. And it is to be kept in mind, that in the very persons in whom, by the use of alcoholic drinks, this fatty degeneration takes place, there is more than the natural pressure on the walls of the bloodvessels, in consequence of the rapidity given to the circulation, its tendency to particular organs, the imperfect removal of the *effete* matter from the blood, and the surcharging of the vessels by overeating induced by the unnatural stimulus of the drink. This weakening of the bloodvessels, and this rapidity or surcharging, have been found to be the most frequent causes of those forms of apoplexy and paralysis, which result from the effusion of blood into the substance of the brain, or upon the surface of it. No person can regularly use these liquors without subjecting himself to such risks; and many a one, who appeared in sound health and of robust body, has been cut off suddenly by such a giving way of the disorganised structure of the walls of the bloodvessels, where no one traced it to his use of such, judging him to have been a moderate drinker.

It will thus be seen that there is no organ of the body that may not be injuriously affected, in the ways mentioned, by the use of intoxicating drinks. Besides these ways, it is to be remembered that injury may be done by the stimulating effect of the alcohol; for it is obvious that, even if no structural disease should be engendered, the functional powers would thereby be impaired. The health of the body depends upon the proper performance of their various functions by all its organs, and this being the case, disease must ensue from the frequent, the common use of alcoholic liquors.

We have not as yet said anything as to their effect on the nervous system. And we need scarcely say, that the influence of alcohol upon that system is very great. Taken in sufficiently large

and often-repeated doses, it paralyses for the time being, or permanently. Taken in smaller quantities, it stimulates the nerves into increased action. Such action is unnatural and unhealthy, and must have a tendency to destroy ultimately the nervous energy. Evidences of this are often seen in the nervous condition of those addicted to intoxicating liquors. The shaking hand, and tottering limbs, and general nervousness, are traceable to the use of the drink; they do indeed steady their hands for the time being, by the unnatural excitement afforded by the glass, but that soon passes away, and they are worse than ever. Many who complain of nervousness owe it, in a great measure, to what they have never traced it to—their daily use of inebriating drinks. A great many of their vapours, and not a little of their nervous tremor, would pass away, by their laying aside those liquors which they deem so beneficial. *It is an ascertained fact, that nervous matter has a special affinity for alcohol*, for a greater proportion of it has been found in the substance of the brain of animals poisoned with it than in their blood. Besides, the vital activity of the nervous system depends entirely on those tissues, which can only be sustained by a supply of oxygen through the blood. But we have seen that alcohol taken into the stomach, and absorbed into the current of the blood, prevents, by its greater attraction for oxygen, that blood from getting its due proportion of that vital element; and in consequence the nervous system suffers. The existence of such an affinity of the nervous substance for alcohol as that referred to, and this imperfect aeration of the blood, render it no marvel that so many diseases connected with the nervous system should result from the free daily use of intoxicating drinks.

Our space warns us to draw to a close, yet we must not omit to notice, however briefly, the special *liability to disease*, which the use of these drinks entails. This was to be expected from the unhealthy effect they have upon the frame; and the result is found to justify the anticipation. When a pestilence or epidemic prevails, those addicted to intemperance, are invariably found most liable of all to be affected by the morbific influences or agencies that are at work, and those who use intoxicating drinks generally, more than those who abstain from them altogether. This was strikingly demonstrated in the various visitations of cholera, which, other things being equal, took its victims specially from amongst the intemperate, or those who were accustomed to the habitual imbibition of intoxicating liquors, and which broke out with special virulence after times in which drink had been freely used. We marked its course with the greatest care; and while there were apparent exceptions, this was the general rule. And what was true of cholera, has been found to hold more or less of other diseases, the state of body being such as gives a ready admission and a powerful hold to morbific influences. But what do we say respecting those who have drunk freely, and yet have lived long? There have been such, we know, but they are the *exceptions;* and in most cases, counteractive influences have been at work to prevent the natural result, and not a few of them have been at last cut down by disease engendered and fostered by their drinking habits. We would counsel our readers against the idea that, because they may have known some who have indulged in drink, and yet seem to have escaped, that they themselves are safe. Intoxicating liquors are not required for the right discharge of any of the vital functions. In every case we are better without them, when in a state of health; and those cases in which they are useful as a medicine, are by no means so numerous as many think. The natural tendency of the use of them is what we have mentioned: we might have shown this at length by quotations from medical authorities. Let us conclude by assuring our readers, that the best authorities bear us out in saying that medical experience points distinctly, in order to the preservation of health, in the direction of entire abstinence from all that intoxicates.

The opinion that mankind were originally savages is unsupported by either reason or history. Had they been created savages, they would probably have remained savages for ever. They could have formed no idea of a civilisation which had never existed, nor have desired comforts the want of which they did not feel. History does not record a single instance of a savage nation having become civilised by its own exertion.

WILD FLOWERS OF THE YEAR.

AUGUST.

"The scarlet pimpernel creeps here and there,
Amid the corn the crimson poppies blush,
Still on the brooks gleam water-lilies rare,
And purple loosestrife and the flowering rush;
Still honeysuckle blooms perfume the gale,
Where bryony leaves adorn the hedgerows green,
Where peep the scabious and the campion pale,
With trumpet-like convolvuli between;
The blue campanula and chickery wild,
And yellow toad-flax, variegate the plain,
And with a thankful heart and sense beguiled,
We look upon the fields of ripening grain."

H. G. Adams.

August, with its flowers and fruits, wears a rich and plenteous aspect. The brown corn, now ready for the sickle, is waving over the field; the broad and leafy branches of the trees afford a shade to the tired cattle; the golden cones of the hop are twining round the tall poles; and the orchard trees are laden with ruddy fruits. The flowers look gay and brilliant, for autumn flowers are mostly yellow, and they seem to cluster in such abundance that none would suspect that they are far fewer in variety than in the preceding months. Perhaps, twice the number of species of wild flowers might be found by the botanist during the month of June than he could find now; and though many summer blossoms still linger, yet those strictly peculiar to August are comparatively so few that we can but remark that the year is making rapid progress to its close.

One of the tribes of the plants most likely to attract our eye during this month, by the great number of its flowers, is the hawkweed. They form a family of plants very puzzling to the botanist, by the resemblance of the species to each other. The hawkweeds may be described generally as flowers shaped like the dandelion; their leaves are also often similar in form; but the whole structure of the flower is higher and more delicate. Some of the blossoms are very small, others as large as a marigold, and they vary in all shades of yellow, from a deep-bright orange colour to the pale lemon tint which distinguishes one of our commonest and prettiest kinds. This species is the mouse-ear hawkweed *(hieracium pilosella)*, and it may at once be known from the others by its paler hue, scarcely deeper than that of the primrose, and also of its creeping scions. It grows on dry pastures, and unless the garden lawn be carefully cut, it will spring up there beside the daisy; for it commonly spangles the short grass, or turf, of that and similar spots.

Several kinds of camomile are also blooming now. All the common sorts of this flower have yellow disks and white rays; but the ox-eye camomile *(anthemis tinctoria)* is wholly yellow. The plant which produces the fragrant flower sold by the druggists as a tonic is a native of Britain. It is the *anthemis nobilis*, and is often cultivated for the purposes of commerce. The bed of camomile is frequently found in the cottage garden, and most fully do the villagers believe the old English proverb: "Camomile, the oftener it is trodden upon, the faster it grows." The whole plant is very bitter, and its old name is derived from a Greek word signifying apples, because it was thought to have the scent of that fruit.

We have five wild species of camomile, and three of these are very common flowers. One kind, the stinking camomile *(anthemis cotula)*, has, indeed, the most disgusting odour. It grows by roadsides and waste places, and often blisters the hands of those who gather it.

A very pretty family of plants, the cudweed, is abundant in August. One species is well known, and may serve to guide to the others, though none of our wild kinds are so handsome as this. It is the flower called everlasting love, and is familiar to those who have visited the celebrated cemetery of Père la Chaise, where wreaths of its blossoms, dyed of a deeper yellow, and intermingled with others dyed of a jet black, are thrown upon the tombs of the beloved, or celebrated, and sold in all the ways which lead to the ground. The Parisians term this flower *l'immortelle.* It is a native of Africa, and the *gnaphalium orientale* of the botanist. Our wild cudweeds are smaller than this, and their stems and foliage generally covered with woolly and cottony down. Most of the wild cudweeds grow on sandy or gravelly heaths, or pastures; some on mountains, and a few on bogs. One of the most frequent, the common cudweed *(gnaphalium Ger-*

manicum), is found on dry places, and as its mode of growth is very singular, it may, by this, be known from the remainder of the species. The stem is about eight inches high, terminated by a globular head of blossoms, from beneath which spring two or three more branches, each having a head of flowers at the point, and these all rise above that which terminates the main stem. The old botanists called this flower, wicked herb *(herba impia)*, because it conveyed the idea that children were undutifully disposed to exalt themselves above the parent flower. It was also called, livelong, chaffweed, cottonweed, and dwarf cotton.

The various kinds of spurge mostly produce their yellowish-green flowers in this and the following month. The sun-spurge *(euphorbia helioscopia)* is common everywhere, and is a good example of our native species, for they are all very similar in general appearance. It is found on waste grounds, as a garden weed, and in corn-fields. Its stem is so full of thick white milk that it is often called churn-staff; and as this liquid is a common cure for warts, it will point out the plant to the reader. We have fourteen wild kinds of spurge, and a number of exotic species have been imported, but they have little beauty. The juice of all is acrid, and almost all our wild spurges are poisonous. One species, the caper-spurge *(euphorbia lathyrus)*, is rare in woods, but it is often planted in shrubberies. It has gray-green leaves, and much resembles the true caper-plant. Indeed its seeds, which are about the size and colour of the caper-bud, are picked and used in Paris as capers; but there is reason to believe that, if eaten in any quantity, they are very pernicious. A very common kind, the cypress-spurge *(euphorbia cyparissus)*, readily distinguished from the rest by its long, slender, numerous leaves, was formerly called, "Welcome to our house;" though on what account so dangerous a herb was so gratefully welcomed one cannot guess. The gum-resin, termed *euphorbium*, which is diluted for medicinal purposes, is obtained by incision from a common African species. Its fresh juice raises blisters on the skin; and the poor people employed in collecting it are so affected by the noxious properties of the withered branches of the plant, that they are obliged to cover their faces with a linen cloth when they approach it. One British species, the Irish spurge *(euphorbia Hibernica)*, is said by Dr. Hooker to be much used by the peasants of Ireland for poisoning, or rather stupifying fish. He adds, that its qualities are so powerful as that a small creel, or basket, filled with the bruised plant, will suffice to poison the fish for several miles down the river.

The corn-fields, which are now ripe and brown, add much to the beauty of the landscape of August. The healthful toil of the reaping peasant, and the busy employment of the rustic maid and matron, are interesting to every one fond of the country.

Corn, in the state in which we have it when cultivated, does not grow wild in any land; and the field of wheat or rye, of oats or barley, as well as the maize and millet-crops of other lands, attest, wherever they are found, that man has been there, not as the roving Arab or the restless Indian, but as the tiller of the soil and the settled inhabitant of the country. The corn-plants are termed the cereal grasses; and that species by which the people of the land is mainly supported is called pre-eminently corn.

The most showy flower of the corn-field, in this month, is the wild marigold *(chrysanthemum segetum)*. The old writers, and even our earliest British poet, Chaucer, knew it by the name of gold; and it is still called goules, or goulans, in some counties of England. It is quite as large, or even larger, than the garden marigold, which flower also grows wild in the cornfields of Southern Europe, and is called by the Italians, the flower of every month. The corn marigold blossoms as early as July, and it bears the cold of winter better than many of our flowers; for if the autumnal and winter seasons are not very severe, it may be found bright and blooming as late as December and

> "Cheering through the shortening day
> Is autumn with her weeds of yellow."

This flower is rather local in its haunts; it is by no means common in Kent, though abundant in some of the neighbouring counties. In the cornfields, within a few miles of Paris, it grows so profusely, that

the land is as gay with its golden flowers as our fields are with the charlock, or our spring meads with the buttercup. In Denmark, it is so common and troublesome a weed, that a law was made, some years since, compelling the farmer to eradicate it. The deep yellow juice of this flower is used, by the Germans, for giving a permanent dye to stuffs. The corn-marigold was formerly called St. John's bloom, yellow-bottle, and ruddes.

Early in this month we find that unwelcome intruder in the corn-lands, the spurrey *(spergula arvensis)*. This pretty little flower may be thus described. Its stem is from six to twelve inches high. The leaves are slender, scarcely thicker than coarse threads, and they stand in circles all around the stem. At the summit is a cluster of white flowers, each hardly larger than that of the chickweed. This plant, though an annoyance in the corn-fields, is so eagerly eaten by cattle, that when it grows occasionally on sandy heaths and pastures, it is a useful herb; and, in Holland, it is sown in fields, for pasturage. It is named from *spargo*, to scatter, because it scatters an abundance of seeds. In Scotland it is called yarr; but the Norfolk farmers, jealous of their corn-lands, term it pick-pocket.

In every hedge may now be seen the pale-yellow spike of the wild mignonette *(reseda luteola)*, which is often called dyers' weed, as it has been used for dyeing, especially in France. The whole plant affords juice for this purpose, and its colour is good and permanent. The coloured paint, called by artists Dutch pink, is obtained from it. Linnæus remarked, of this flower, that its spike of bloom always follows the course of the sun, even on a cloudy day: turning, at sunrise, to the east; at noonday, looking up to the south; in the afternoon, marking the west; and, with its half-closed flowers, standing at night, pointing duly to the north. It is very similar in appearance to that sweetly-fragrant plant, the garden mignonette *(reseda odorata)*. This latter flower is a native of Egypt, and was known, long after its introduction into England, by the name of the Egyptian's mignonette.

The tansy *(tanacetum vulgare)* grows wild in some fields. It was formerly called Athanasia by botanists, and the French still dedicate it to the saint of that name. The flowers of the tansy are in thick, yellow clusters. Its strongly aromatic and bitter principle render it a useful plant in medicine; and its young leaves are made into puddings, cakes, and omelets, though the flavour is too strong to be generally palatable. A distilled water is obtained from this plant. This flower was formerly very general in gardens, but is left now for the cottage-ground, where, in the rustic plot, it still takes its place with the flowers which the poet Clare describes,—

"And where the marjoram once, and sage and rue,
And balm and mint, with curl'd-leaf parsley grew,
And double marigolds, and silver thyme,
And pumpkins 'neath the window used to climb;
And where I often, when a child, for hours
Tried through the pales to get the tempting flowers:
As lady's laces, everlasting peas,
True-love lies bleeding, with the hearts at ease;
And golden rods, and tansy running high,
That o'er the pale-top smiled on passer-by;
Flowers in my time, that every one would praise,
Though thrown, like weeds, from gardens now-a-days."

On a few sandy soils may now also be seen the plant called field southernwood *(artemisia campestris)*, with its smooth green leaves and whitish flowers. It has been found chiefly on some lands of Norfolk and Suffolk, especially near Thetford and Bury. Then the old village remedy for numerous ills—the elecampane *(inula helenium)*—puts forth its bright yellow stars in the moist pasture or hedge. This is one of the largest of our wild flowers; and it was formerly much esteemed for its tonic properties. Its root is glutinous and aromatic; and from it is made the candied sweetmeat called elecampane. The whole plant is downy, and its stem is about five or six feet high. A good blue dye exists in its juices.

The May-weed *(pyrethrum inodorum)* is so truly an autumnal flower, that it is little entitled to its spring-like name. In August and September, when the corn is being cut down, and after it is gleaned, the fields are full of it; and it may be commonly seen as late as December, looking, indeed, somewhat the worse for wind and weather at that season, though in August it is a pretty flower. Notwith-

standing its Latin specific name, it is slightly scented, and is considered to possess some good tonic properties.

One beautiful flower, growing by the river side in this month, is very general and very conspicuous. The tall hemp agrimony *(eupatorium cannabinum)* is often five feet high. Its flowers grow in crowded clusters of a pale flesh-colour, and are not unlike those of the garden valerian, which is sometimes seen wild also on walls. The hemp agrimony is slightly fragrant, and has been used medicinally. Indeed it is of old renown, for Mithridates, king of Pontus, first discovered its good properties.

(To be continued.)

VARIETIES.

Deceit.—Persons who practise deceit and artifice always deceive themselves more than they deceive others. They may feel great complacency in the view of the success of their doings; but they are in reality casting a mist before their own eyes. Such persons not only make a false estimate of their own character, but they estimate falsely the opinions and conduct of others. No person is obliged to tell all he thinks, but both duty and self-interest forbid him to make false pretences.

Dangerous Use of Strychnine.—The salmon-fishers in the employment of Mr. William L. Taylor, bank agent, have it in contemplation to adopt the following novel method of destroying the seals, which are exceedingly numerous about the salmon-nets at Gollachy and Buckie, and doing immense damage to the fishings in that quarter this season. Strychnine, made up in the form of pills, is to be the agent employed in their destruction, and a young grilse the medium through which the "Palmerian" medicine is to be administered. The grilse, immediately after being captured, will be opened, and the pill being inserted, it will then be neatly sewed up, and attached to the net in such a manner as to have the appearance of being alive and in the act of swimming, and thus attract the notice of the seals. It may be well, however, in the event of any of the grilses so prepared becoming detached from the nets, and cast ashore, to warn parties who may happen to find them, not to use them, but to destroy them at once. They will be easily detected, as the sewing up, after inserting the strychnine, will be quite visible.—*Banffshire Journal.*

Medical Remedy for Drunkenness.—I would recommend ipecacuanha as a remedy for drunkenness, taken in half-drachm doses as an emetic. Ipecacuanha has the extraordinary property of stimulating the whole system, equalising the circulation, promoting the various secretions, and, indeed, assisting each organ of the body to perform, and to restore it to its normal state. Ipecacuanha can be taken with perfect safety as an emetic; on that account I believe the administration of half a drachm of ipecacuanha as an emetic to be a cure for periodical drunkenness. It is observed that in the intervals between the periods of these attacks the person is quite sober, and often remains so for two, three, or four months, or for a longer time. When the mania comes on, the intense desire for alcoholic stimulus is so strong as to render the sufferer subject to no control, and, from the sensation of depression and sinking, he can look upon alcoholic stimulants as his only remedy. When a person is in this state, it will be always found that his stomach is in fault, and the unnatural appetite arises from that cause alone; if half a drachm of the powder of ipecacuanha be taken, so as to produce full vomiting, the desire for intoxicating stimulants is immediately removed. From the experience I have had of the effects of ipecacuanha, I am of opinion, if a patient can be persuaded to follow up the emetic plan for a few times when the periodical attack comes on, that he will be effectually cured, and the habit (for such I look upon it) will be broken.—*The Lancet.*

Advice to a Young Physician.—Let me strongly forewarn you against one frequent error. Young physicians often dream that by extending the circle of their private acquaintances, they thus afford themselves the best chance of extending the circle of their private patients. In following out this chimerical view, much invaluable time is frequently lost, and, what is worse, habits of pleasure and indolence are often, with fatal effect, substituted for those habits of study and exertion that are above all price. No man will, in any case of doubt or danger, entrust to your professional care the guardianship of his own life, or of the life of those who are near and dear to his heart, merely because you happen to be on terms of intimacy with him. The self-interest of human nature forbids it. To have professional faith and confidence in you, he must respect you in your calling as a physician, and not merely in your character as a social friend and companion. The qualities for which he might esteem you in the latter capacity are often the very reverse of those which would induce him to confide in you in the former. The accomplishments which may render you acceptable in the drawing-room are not always those that would make your visits longed for and valued in the chamber of sickness and sorrow. I repeat, therefore, that if you dream of making patients by making friends, you will utterly delude yourselves and damage your own prospects. By your undivided devotion to your profession, labour to create for yourselves a sound and just medical reputation, and that reputation will create for you patients.—*Simpson's Physicians and Physic.*

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE EPIDEMICS OF THE SEASON.

The changeable climate of this country is doubtless the cause of many diseases. Within the short space of three days, the thermometer has varied fourteen degrees in the shade. Changes so great must powerfully affect weak and highly sensitive constitutions. Life and health, as we have often stated, are dependent on the amount of heat in the human frame. Colds, fevers, and all catarrhal diseases, are to be accounted for on this principle. A defection of the quantity of caloric may occasion any of these diseases. It is therefore the object of the scientific physician to increase the amount of vital heat by the administration of cayenne and other heat-producing remedies.

Diarrhœa is one of the diseases common to the season, and has been very general during the last few weeks. In many instances it has proved fatal, especially among the young and delicate. It has frequently been ascribed to the indiscretion of the patient in indulging too freely in eating fruit; but though this may account for the attack in some instances, we think this is rather an auxiliary than a primary cause, since it is well known that many have fallen victims to the disease who have entirely abstained from all kinds of fruit. The sudden change of temperature is much more likely to occasion an abstraction of heat from the human frame, and thus by destroying the healthy equilibrium, produces that derangement which can be corrected only by the reproduction of warmth by artificial means or heat-generating medicines. Diarrhœa, however, is not unfrequently the forerunner of cholera. It is a friendly warning, bidding us prepare to meet and repel the coming foe. Sometimes it happens, and always it may be expected, that the patients who have suffered from diarrhœa, and apparently recovered, fall under the power of cholera, and never rise again. This is to be accounted for, in most cases, from the depletive and lowering treatment which their medical advisers have adopted. Quacks administer powerful and poisonous medicines which produce a great change at the time, and this passes for a cure, while in reality the constitution is damaged and entirely unfitted to stand against another attack of disease. Many human bodies, by the treatment of some medical practitioners, are transformed into living barometers, which sensibly indicate all the alternations of the weather and the wind. This is effected by the administration of mercury, in the numberless forms in which it is now prescribed. The country would very speedily show a great diminution in the amount of mortality, if the use of mercury as a medicine were entirely prohibited. In this opinion some of the most distinguished men of the old medical school have had the candour to concur, and to add, that if they had now to commence practice, they would banish mercury from their pharmacopœia. There are thousands now living who have good reason to wish that the whole faculty had come to this conclusion years ago. We are advocates for heat-generating medicines, in almost all diseases to which flesh

is heir, but especially in those which belong to the cholera class, whether in the severest or the mildest form; and hence we advise the more frequent use of cayenne with all vegetable productions, as a preventive of the incipient forms of cholera.

Catarrhal disease may be expected at this season of the year. This is sometimes known by the name of influenza. It is usually produced by a sudden check of perspiration, or any other cause which diminishes the vital heat. It shows itself by indications that the mucous membrane is relaxed; such as affections of the throat, "running at the nose," disinclination for food, and depression of spirits. This often proves to be the seed-time of mortality. As at this season some kinds of grain are sown, and the seeds lie comparatively dormant in the earth, striking their roots downwards, and making but little show upwards, so the seeds of fatal disease are sown at this season; and during the coming cold months, artificial fire, warm clothing, and diet, all combine to prevent the outward manifestation and growth of these seeds; but too frequently they progress inwardly, and in the months of spring the dreaded plants are seen as they prove to be the deadly results of the seeds long sown. The advice of the ancient philosopher, "Prevent beginnings," becomes appropriate now, and disease averted at this season prevents the debility and depression which necessarily attend it, although it should not prove fatal. But no conduct can be more absurd than that which is often pursued by those who treat incipient disease with indifference, and repel all advice and proffered assistance by saying, "It is only a cold." A youth once made use of this sentence in the presence of an aged physician, who rebuked the thoughtless speaker by emphatically saying, "Only a cold? What would you have but your death-warrant" The youth did not take the hint given. He continued to maintain the most reckless indifference to all advice, and four months after, the most decided and alarming symptoms of pulmonic disease showed themselves, and in two months—just about six months from the time that he said, "It was only a cold"—he died.

At the present season, cautionary measures should be taken to prevent the beginning of disease; attention to clothing, to exercise and diet, should be among these cautionary measures. No person should be without the stomach bitters. A dose or two of these bitters will prove highly beneficial in keeping up the equilibrium of heat in the human frame, and thereby preventing any disease from making way in the constitution. Dr. COFFIN'S Cholera Powder should be in every house, that it may be in readiness as soon as the first signs of an unhealthy laxity appear. Many lives have been spared through the use of this medicine, and none have ever taken it without deriving great benefit. Attention to the advice contained in this paper will prevent many falling victims to the epidemics of the season.

A FEVER AND ITS CURE;

HITHERTO OMITTED FROM ALL BOOKS OF MEDICINE.

WE must acknowledge a disregard for our numerous friends' welfare in not before bringing this common, shockingly prevalent, and yet hitherto neglected disease before them. We cannot take credit to ourselves for seeking to gain a greater measure of wisdom than we already possess, but, be that as it may, we lately were searching among the records and experiences of bygone times, and lighted upon an account of this remarkable and yet familiar complaint, together with its cure, in an ancient book, published in 1557, entitled "The Brevary of Healthe, by Andrew Boorde, Physyche Doctour, an Englishman," from which we at once make the following extract:—"The 151 chaptre doth shewe of an evyll fever, the whiche doth combate yonge persons, named the *fever burden.* Among all the fevers, I had almost forgotten the fever burden, with the whiche many yonge men, yonge women, and other yonge persons, be sore infected now-a-days. The cause of this infirmitie:—This ever doth come naturally, or els by evyll and slouthful bringing up. If it do come by nature, then the fever is incurable: for it can never out of the fleshe that is bred in the bone. A remedie, there is nothing for the fever

burden as *unguentum baculinum;* that is to say, take a stick or wan, of a yard of length or more, and let it be as great as a man's finger, and with it anoynt the back and shoulders well, morning and evening, and do this twenty-one days; and if this fever will not holpen in that tyme, let them beware of the waggyne or the gallows; and whyles they do take theyr medicine, put no lubber-wort in theyr pottage."

If our readers are at a loss after this lucid description, a little reflection will convince them this marvellous fever is none other than the *lazy fever*, and its "remedie" simply *birch ointment (unguentum baculinum)*, or in default of this, *strap oil* will do as well. If the worthy "Physyche Doctour" had left out his 150 previous chapters, and staked his fame upon the 151st, we doubt not his book would have had as great a circulation as it secured, and the name of "Boorde" been handed down to posterity as a physician who treated disease upon natural principles.

It occurs to us, that the slow progress of that great scheme which ought to be dear to all Medical Botanists (by which term we mean not only practitioners, but all who have derived benefit from the principles and practice of the rational system of medicine taught them)—we allude to the Botanic Hospital and College—may be due to this infection, and if so, the sooner they thoroughly purge themselves by a liberal dose of *unguentum baculinum*, morally or physically, whichever will best serve them, the better for themselves and for posterity, who certainly will bestow a moral castigation on their memories, if they neglect to secure to their fellow creatures, now and for future generations, so all-important and blessed an institution.

COMPULSORY VACCINATION.

(Concluded from page 113.)

The arguments advanced in favour of vaccination may be thus briefly summed up:—

1. The majority believe in vaccination.

2. Sometimes, when small-pox appears in a house or a locality, vaccination checks its further spread amongst the inhabitants.

3. Some persons, who have been vaccinated, live and die without ever catching small-pox.

4. The average mortality from small-pox is less in countries where it is strictly enforced than in lands where it is optional. And,

5. Small-pox is not so rife and fatal, and there are not so many scarred visages, as there used to be fifty years ago.

To these arguments it may be replied:

1. That the majority believe in vaccination is a mere assumption; but even if it should be true, it would scarcely afford sufficient data upon which to decide a debatable medical question. It would scarcely do to bow down to the will of a majority as a test of truth, or to accept an opinion merely because it should chance to be the popular one. Had such been the received criterion of truth in the days of the persecuted Jenner, we should not now be engaged in repelling the aggressions of his intolerant disciples. Who is so blind as to contend that truth shifts and changes with majorities, or that minorities have no rights, and must ever be in the wrong? After all, of what weight is the testimony of the credulous believers in a nostrum? There is no mysterious specific that crowds of unthinking fanatics do not trumpet forth its miraculous powers. If it should be said that by a majority is only meant a majority of the educated classes, I must ask of what utility is the education that fosters unreasoning credulity?

2. That the spread of small-pox, when it makes its appearance in a house or a locality, is frequently checked by the vaccination of the healthy, seems too hasty an inference from the facts adduced in proof. The truth appears to be, that the contagion is encountered and successfully resisted by the innate conservative power in the human system, before recourse is had to the presumed prophylactic. The ordinary period of incubation of small-pox is fourteen days; and yet Dr. Geo. Gregory ("Eruptive Fevers," pp. 66) states, "*Contagious emanations* are given off from the human body at every stage of small-pox, *from the first invasion of fever* to the throwing off of the latest scabs."

There are various facts, too, which lend

a colour to the belief that the merit frequently attributed to vaccination is in reality due to the innate power of the system to resist the invasion of disease.

Ida Pfeiffer was a passenger in a steamer in the East. The women and children of a harem came on board, and took possession of the cabin; they brought small-pox with them; five of them died. The pestilential vapour from the cabin was horrible; but the disease did not extend beyond the harem.

Captain Canot and his slave cargo were many weeks at sea when a case of small-pox occurred amongst the slaves. The wretch, with all the *sang froid* and good intentions of a compulsory vaccinator, perpetrates what he daintily calls "a necessary murder," and the disease did not spread.

If in these cases vaccination had been had recourse to, we should never hear an end of its praises as the blessed means of checking the spread of small-pox. Truly that must be a valuable prophylactic which offers a mock protection after the danger has been encountered and overcome!

3. As regards the fact that many persons who have been vaccinated pass through life without being seized with small-pox, it reminds one of Bacon's whimsical defence of the use of amulets, that the happy possessor only died once, and seemed to escape often; and it may be met and balanced by another fact—that a far greater number of persons who have not been vaccinated enjoy a like immunity.

4. Instead of drawing an inconsequent comparison between the mortality from small-pox in these kingdoms and in some down-trodden foreign states, in which, with dire consistency, vaccination has long been compulsory, it would be somewhat more to the purpose to state the respective annual average mortality, both from small-pox and from all causes, in the same foreign states, during comparative cycles of years, embracing periods when small-pox was epidemic as well as when it was not so, both *before* and *after* the introduction of vaccination. Should we be presented with such statistics, it would be but considerate to accompany them with a caution, that "paternal governments" have peculiar facilities for cooking statistics to justify anything whatsoever that may furnish an excuse to treat their subjects as children or as slaves. It would be also wise to add, that, notwithstanding the paternal care of such governments, there are seasons when small-pox will obstinately assail whole districts, and spread terror and devastation around.

The Swedish Dr. Berg, as quoted in the *British Journal of Homœopathy*, No. 30, from the German Journal, the *Hygiea*, part iii, p. 127, says:—"The small-pox epidemic which commenced in October, 1837, and ended in September, 1838, consequently of one year's duration, was the greatest that ever was known;" and he adds, that the percentage of deaths in the Royal Military Hospital, amongst small-pox patients, was $6\frac{1}{15}$. Further, it would by no means tend to hinder the drawing of just conclusions if two important facts were considered; namely, that in these kingdoms small-pox is much propagated by the pernicious practice of inoculation; and that, in many foreign states, in which vaccination is compulsory, *the deaths from all causes* are much in excess, *in some instances double.*

It would likewise be helpful, in drawing comparisons between the respective mortality from any given disease in these kingdoms and in any foreign state, to consider the influence of climate upon health in general, and upon the manifestations of epidemic disease in particular; and this important point might be illustrated by the following apt quotation from Dr. Gregory:—"There are some countries as yet unvisited by the exanthemata. Small-pox, measles, and scarlet fever, are to this day unknown in Australia and Van Diemen's Land." And yet—can it be believed?—instead of trying to ascertain, like rational beings, the cause or causes of this happy exemption, overbearing fanatics who practise vaccination have not only introduced it into those hitherto highly favoured lands, but have actually succeeded in making it compulsory there!

5. With respect to the relative number of scarred visages at the present time and at the distance of some fifty years

ago, as my memory does not extend so far back, I can make no comparison; but, oddly enough, I can call to mind some instances of scarred visages, whose owners had been duly protected by vaccination. Moreover, some facts offer themselves to my judgment as accounting very satisfactorily for the decrease (if there be a decrease) in the number of "scarred visages," without compelling my recognition of the claims put forward in behalf of a disgusting nostrum. If it can be shown that the present comparative immunity from small-pox is mainly owing to vaccination, what need to legislate upon the subject? Do not thousands, who have never been vaccinated, escape the disease without taking any particular care to avoid contagion? Does vaccination protect them? Can it be even said to do so indirectly, by lessening the chances of contagion, when it is borne in mind that small-pox is always in the midst of us, and that it frequently springs up spontaneously in a locality? Are there no persons as insusceptible to small-pox contagion as to the action of the vaccine virus? What protects them? Is no account to be taken of that *vis vitæ* which resists the invasion of disease? To what else but this conservative power is it due that so many individuals are insusceptible of the action of the vaccine virus? Cannot this power be exalted by due care to resist small-pox, as well as depressed by repeated assaults, until the system succumbs to the vaccine virus? Would not true science rather seek to strengthen than to weaken this innate power? Can it not be strengthened by good food, pure water, fresh air, temperance, cleanliness, ventilation, exercise, regular moral habits, and a cheerful, well-regulated mind? Dare any seriously maintain that it is best sustained in its integrity and activity by *corrupting the stream of life*—the pabulum and "sum of all the organs?" Can the decrease in the ravages of small-pox be shown to have proceeded, *pari passu*, with the extension of vaccination? Are there no other causes to which to attribute the lesser mortality from small-pox at the present day? Has science done nothing towards bringing in a less irrational treatment than the murderous one of former days? Have sanitary regulations effected nothing towards checking *every* form of epidemic, or are they only powerless to restrain small-pox?

A FEW WORDS ABOUT FRUIT.

IN TWO CHAPTERS.

CHAP. I.

AT this season of the year a few words about fruit may not be out of the way. The gardens in the country, and the markets and shops in the town, offer the most tempting displays of nature's choicest gifts in the shape of something to eat. To the juvenile part of the community there is one unceasing round of temptation presented, and pennies innumerable are begged to gratify the unconquerable longing of the youthful palate. Sweet-shops are at a discount, and the maker of sugarsticks and lollypops racks his inventive genius in vain in producing sham cherries, sticky apples, and pale-faced plums, which, however bright and gaudy by the aid of vermilion, red lead, turmeric or verditer, are obliged to yield to the *real* article from nature's grand confectionary—the orchard and fruit-garden. Now anxious and indulgent mothers are ministering unadvisedly with the one hand doses of rhubarb, gray powders, salts and senna, to "work off" the ill effects of the *doses* of cherries, plums, currants, &c., which they have as unadvisedly ministered with the other, to their tender offspring, who, however patiently they submitted to the latter operation, kicked most furiously at the former. Now every bowel complaint, or disturbance of the lower regions of our mortal frames, is attributed to the fruit, and although there are many timid persons who deprive themselves of the delightful gastronomic pleasures of the season, for fear of cholera, dysentery, or diarrhœa, yet even these, if they should have a bellyache, vow it is in consequence of the "plum season," or in some other way ascribe their malady to the innocent fruit, and believe the very air to be impregnated by some deleterious influence thrown off by the alarming "Orlean," or in the choice vernacular of the costermonger, "Arline plums," and gaze upon the bewitching blush of a peach or apricot, as

they would upon the exterior of a "whited sepulchre."

Such unfortunate hypochondriacs will remark of such a year of the cholera, that "it was a most extraordinary plum year," as if, independently of touching, tasting and swallowing, these awful plums could convey all the dreadful disorders attributed to their agency. All this is very great nonsense, and it makes one savage to hear any one in these days believing in such unscientific and irrational conclusions.

Fruit is to be eaten, and it comes at a time when it is good to eat it. The body requires at this season cooling; the expansion and "opening up" of the system are calculated to develop disease which may have lain dormant all the winter; and there is an activity of our organisation produced which it is of the utmost importance to aid and regulate; for if one part of our system works beyond another either in strength or speed, except in its due proportion, derangement must ensue. How universal is it for eruptions and skin diseases to appear at the commencement of the hot season! This is the result of a putrefaction, caused by a sluggish operation of some of the excretory (or expelling) organs, in consequence of which, hurtful matter, that should have passed away, is still retained, and nature is thus endeavouring to get rid by other channels of the offensive substance. Primarily, in most cases, this sluggishness is in the bowels. The absorption by the lacteals from the chyle in its passage through the small intestines (jejunium and ilium) is improperly conducted, and instead of their absorbing pure matter for transmission to the heart, to be made into blood, they absorb from that which ought, by a proper activity of the bowels, to have passed out of the system, and so take into the blood impurities which poison it, and when these become too numerous for rejection by the other organs of excretion, nature, as has been said, finds other means, such as rashes, boils, and other eruptions, to throw them off. It is evident, then, that if the heat has caused one part of the human machine to go at a greater speed than ordinary, all other parts must correspond, and if they do not, an accumulation of hurtful matter must take place, and like all other heaps of rubbish, will putrify and decay. An antiseptic (or destroyer of putrefaction) is therefore required in the body, as well as a spur or excitant to more vigorous action. In fruit we have these, and while it gratifies the palate, it cools and stimulates, by its acid and antiseptic qualities, the entire system.

But the mischief is, that human nature is one of the most unmanageable affairs, as guided by the majority of those who have charge of it; and it is only in the hands of the wise few that it performs its functions with decent correctness. People will eat fruit (as most other things), at improper times, or in improper quantities, and then the necessary consequence following of uneasiness or positive sickness, the fault is laid to the fruit, and not to the indiscretion of the foolish sufferer. There is a "time for all things," and fruit is as necessary and proper as corn and the esculent vegetables in its due season.

The rich, in addition to their other irrational modes of feeding, eat fruit at dessert on the top of a dinner composed perhaps of soup, fish, meat and poultry, with a variety of outrageous insults to the human appetite in the shape of pastry, custards, jellies, &c., and were it not for the assistance of heavy wines, such as port and sherry, with something stronger after (as is the custom, especially in Ireland and Scotland, where "toddy" is an after-dinner essential), it is impossible to say what would be the consequences of such miscellaneous stuffing as our wealthy neighbours daily force into their stomachs. Our poorer brethren do what they can to imitate their betters; and although, most fortunately for themselves, they cannot do so every day, yet on Sunday they do their best, or rather their worst, to follow so wretched an example, by allowing themselves and their children to stuff with fruit all the afternoon, after having had a bellyful of meat and pudding, which all try to get on that day, if they go short all the week besides. On that day of rest, when the body requires less from not wasting so much as by labour it does on the other days, a general system of stuffing goes on, and the weekly pence to the children are then spent in simply gorging, and without doubt *two* Sundays in the week would infallibly de-

stroy half the children of those classes who can but secure an extra portion of the good things of this life on one day, instead of seven, out of the week.

"But," says the reader, "you have told us nothing about fruit yet." True; but really this chapter has already reached so alarming a length, that the "few words" of practical instruction must be left to chap. No. 2.

GARDEN FLOWERS OF SEPTEMBER.

"Whither be the violets gone,
Those that bloomed of late so gay,
And in fragrant garlands strown,
Decked the blooming flower-queen's way?
Youth, alas, the spring must fly,
Yonder violets withered lie.

Whither are the roses fled,
We so gaily singing bound,
When the brow of shepherd maid,
And the herdsman's hat was crowned?
Maiden, summer days must fly,
Yonder roses withered lie."

JACOBI.

ALMOST all the flowers of the last month bloom also during September, yet now, as their number will seem gradually to diminish, we are pleased to mark the bright foliage of the evergreens, and to look on the pale-greenish flowers which hang among the branches of the arbutus or strawberry tree. The common arbutus is now generally enumerated among British plants, but several others, as well as this species, are cultivated in this country. The oriental arbutus *(arbutus andrachne)* is scarcely less general than the common kind, though requiring more care. It blooms some months earlier than that, and may be distinguished by the greater beauty of its foliage and flowers, its broader leaves, which are also less notched at the edges, and by its red bark which peels off, and leaves much of the trunk smooth and brown.

This arbutus is a native of the Levant. In the isle of Cyprus it attains an enormous size. In a great part of this island, no other tree is large enough to cast any extent of shadow, and the inhabitants sit in parties beneath its boughs. Both this and our common arbutus are abundant in many parts of Palestine, and growing to a much larger size, they are very picturesque objects, the oriental species flowering in spring, and our common kind in autumn. The arbutus, in the lovely valleys, is often found with a stem six feet in circumference, and, with the oak and the fir, is said to be one of the trees which principally give a wooded character to the hills of Gilead and Bashan; so too, in southern Judea, these shrubs form an important part of the woodland scenery, mingling with the Scotch fir and the oak; and although the olive still is, as it ever was, the characteristic tree of Palestine, yet the arbutus is so general as to attract the attention of all travellers who observe the scenery of the Holy Land. Its fruits, too, are more beautiful and conspicuous than its flowers, and they may be safely eaten. A very showy species from the Canary isles is kept in the greenhouse, and we have also a handsome Peruvian kind.

And now clumps of the China aster *(callistephus)*, with their large stars of white, lilac, pink, purple, or variegated blossoms, are among the most attractive of the autumnal flowers. This is one of the flowers which the Chinese prize and cultivate so highly, and in China it is much larger than in our gardens. Several kinds of starry flowers, under the general name of aster, among which are this genus, as well as that commonly called chrysanthemum, receive especial care in China. By this people, their large water-lily, the *nelumbium*, is esteemed as the very chief of flowers; and though it grows wild in their streams, yet it is brought into their enclosed grounds. Next to this, in their estimation, come the fragrant olive *(olea fragrans)*, and the innumerable varieties of starlike blossoms which glitter in golden beauty, or are shaded off to most delicate tints; and which, arranged on terraces, one above another, offer every variety of hue.

The Michaelmas daisy, or Christmas daisy, arrayed in its sober tints, is a very useful flower now, when flowers seem gradually going, and brown leaves rustle on the spots where zephyrs lately played among soft, green branches. The common Michaelmas daisy *(aster tradescantia)*, and the Alpine species *(aster Alpinus)*, are among the handsomest kinds. Like most of the genus, these flowers are na-

tives of the fields of Virginia, and the common kind was named in honour of the celebrated naturalist, John Tradescant, who introduced it in England among several other plants, the seeds of which he brought from America.

Far more beautiful in colour are the brilliant, bell-shaped blossoms of the gentianella, or large-flowered dwarf gentian *(gentiana acaulis)*, which are now blooming for the second time in the year, and seem to be as vigorous at the autumnal season, as in the early months. This beautiful flower grows in profusion on the Welsh mountains, and has been found on some of the highest of the Swiss Alps. Its large flowers are of the colour called mazarine blue, and they are sometimes used as an edging for the border. It is less difficult to cultivate than most of the gentians. These flowers, inhabiting naturally the high mountain regions, require conditions of atmosphere not to be found in the lowland garden. A pure and rarefied air blows over the lofty height where they grow wild, and the bright light of the summer season on the mountain can never be rivalled on the plain. The effect of a bright light on colour, has been well ascertained by dyers, who cannot produce the most brilliant tints under a cloudy sky; while it is equally evident in its effects on the plants which exist under its influence. Our winters, too, are often unfavourable to mountain flowers; for though the cold of elevated regions is far more severe, yet the snow remains much longer on the earth, and thus the plants are not subjected to the alternate frosts and thaws to which they are exposed in the winter and early spring of our country.

We have in our fields a pretty gentian *(gentiana campestris)*, which, however, attains a greater degree of perfection in some other countries, and in the month of October covers the tops of the hills of Norway. In Sweden, too, it is abundant at the same season, and it is described as one of the most beautiful flowers of the alpine pastures of that land, its blossoms clustering among the short grass, and studding all the surface of the mountain. "The whole plant," says Dr. Clarke, "was scarcely an inch in height, and seemed to consist of little else than the petals of its flowers, which, in size and luxuriance, were out of all proportion to its diminutive leaves and branches."

The taller yellow gentian *(gentiana lutea)* is also a species which can be well cultivated in the British garden. This flower, besides being handsome, is valued for the bitter medicine afforded by its root. It grows wild on the mountains of all the central parts of Europe, and is gathered for the French and English markets. The root also contains an abundance of sugar, and a spirit is distilled from it called *enziangeist*, or bitter snaps, which the peasants of the Swiss Alps drink, under the idea that it will preserve them from the injurious effects of the fogs and damps sometimes prevalent on these regions. Wherever this bitter plant abounds, the pastures are untouched by cattle, and large tracts of land which the herdsman would value, remain unused, because of its bitterness. It is this principle, however, which renders it so useful in medicine, and it is one of the medicines of greatest antiquity. In the West Indies, where the European constitution becomes languid by the heat of the climate, it is customory to take a preparation of gentian before meals, in order to assist the appetite.

Some other gentians may also be seen commonly in the garden. The small Alpine species *(gentiana nivalis)*, which delighted Linnæus when on the Pyrenees by its blue blossoms, is tolerably hardy; and the kind termed Calathian violet, succeeds well. These have both blue flowers. The name of Gentius, a king of Illyria, is preserved to memory by these flowers, as this monarch is said, by Pliny, to have discovered their tonic virtues.

The different kinds of autumnal crocus open as the season advances. The purple species, which is so general in this and the next months, is the saffron crocus *(crocus sativus)*, the stigmas of whose flowers form the saffron of the druggist. This flower has long been cultivated in many parts of Asia, as well as in Greece. In Persia and Cashmere, large plantations of this crocus are general, and some of the lands of Smyrna are said to be quite purple with it, while its flowers are in great abundance in the gardens of Aleppo. In Europe it seems to grow

wild on the south of Tyrol, and on the Alps of Savoy; but its occasional appearance in our British meadows does not prove that it is indigenous there. Dr. Clarke found the plains of Tahtary covered with its gay flowers, and its bulbs were deeply seated in the black vegetable mould which forms the soil of these wide plains. Notwithstanding that the saffron crocus is cultivated in England, yet we receive our chief supply of the drug from France and Spain. In the latter country the cultivator of this flower is much annoyed by a fungus found upon it, and which the French call *mort de safran*. Saffron was formerly much employed as a medicine and condiment, and is still so used in the east. The ancients esteemed it as a perfume; and so high an opinion of its cheering and stimulating powers was once prevalent, that when a man was merry, he was said to have slept on a bag of saffron.

And now, when the meadow saffron is, by its purple, crocus-like flowers, turning our wild pasture lands into a gay carpet, we find, too, in the garden, several cultivated species of this plant. Like the wild colchicum, the leaves of all wait for the following spring to make their appearance. Our garden colchicums are of many colours, and several varieties have double blossoms. None, except the wild colchicum, is of much value to the druggist; but great quantities of the roots, seeds and blossoms of this are annually collected for medicinal purposes. Though very similar to the saffron crocus, so much so, that an inexperienced observer would mistake the one for the other, yet one simple and obvious distinction exists, in the fact, that the crocus has only three stamens and one central column, or pistil, whereas the colchicum has six stamens and three pistils. This distinction might seem of little worth, yet it is truly valuable; since, though the crocus is a plant which is perfectly innoxious, yet all the species of the colchicum possess an acrimonious quality, which, in the meadow saffron of our fields, is highly poisonous. Our garden species are some of them from the isles of Greece, and some from Hungary and Russia. They were termed colchicum from the ancient Colchis, interesting to the classic reader, by its association, in the legends of ancient Greece, with the expedition of the Argonauts.

UNWHOLESOME MEAT.

The Metropolitan Association of Medical Officers of Health, at their monthly meeting in June, considering the subject of unwholesome meat of great public importance, appointed a committee, consisting of Dr. Letheby, Dr. R. D. Thompson, Dr. Barnes, Mr. Liddle, Dr. Gibbon, and Dr. Druitt, with Dr. Challice as chairman, to inquire into the facts relating to the alleged sale of diseased and unwholesome meat in the metropolis, as well as the ill effects arising therefrom, and the best mode of prevention. The following report was read at the general meeting of the association, held at the Board of Health, on the 6th of August, and ordered to be printed for the use of the members of the association, and for the guidance of the inspectors of nuisances, in carrying out that section of the Nuisances Removal Act which relates to the sale of diseased or unwholesome food:—

The committee, appointed by the Metropolitan Association of Medical Officers of Health to inquire into the subject of unwholesome meat, report that they have taken every opportunity of making themselves acquainted with the facts of the case, both by personal observation and by conferences with Mr. Fisher, inspector of meat and slaughter-houses, in the City of London, and with Mr. Pocklington, inspector of markets, to whom they express their thanks for much valuable information.

In the first place, your committee consider the fact to be fully proved, that large quantities of unwholesome meat are constantly on sale to the lower orders in London. At their first meeting, on the 21st of June, Dr. Challice produced several specimens which had been exposed for sale at butchers' shops in Southwark, and which had been either purchased by him, or seized under his directions, on the same day. For example, there was a sheep's liver which had been seized. It was dark, soft, and ill-smelling, and the veins contained fibrinous coagula. There was a shoulder of mutton, purchased at 7d. per lb.; the fat of a dirty yellow, the muscle emaciated, and of a peculiarly light colour and sour smell. There was part of a sirloin, purchased at 6d. in Bermondsey, not ill-looking, but wonderfully thin and quite destitute of fat. There were also specimens of veal and beef of nauseous appearance; and side by side with these Dr. Challice exhibited a piece of the boiled flesh of a healthy horse, accidentally killed, which looked and smelled quite wholesome, and a leg of mutton, plump, firm, and of pure, white fat, which was destined

for the paupers' dinner in Bermondsey workhouse on the next day. The contrast between the mutton provided by the Board of Guardians for the paupers and that which was offered for sale to the industrious classes was palpable enough.

At a subsequent meeting Mr. Fisher and Mr. Pocklington were good enough to bring and exhibit portions of beef and lamb which had been seized, on that day, in Newgate-market. The beef was thoroughly wet and soft ; the lamb wet, soft, utterly devoid of fat, in the areolar tissue, and within and around the kidney ; pus was found in the areolar tissue of the pelvis by Dr. Gibbon ; and the smell of both specimens was incredibly nauseous.

Your committee have also the evidence of Mr. Fisher, that he often sees meat exposed for sale in the suburbs which he should seize if within his own jurisdiction in the City ; and of Dr. Gibbon, who has caused unwholesome meat to be seized in the Holborn district.

The fact, then, that such meat is habitually offered for sale is indisputable. As to the quantity of it your committee can only refer to a return with which they have been favoured by Mr. Daw, of the City-sewers' Office, showing the quantity seized in the City of London during the year 1855. By this it appears that 26 live animals, 612 entire carcasses, 696 quarters, 8 sides, and 227 joints of beef, mutton, veal, and lamb were seized in that year, besides an immense quantity of poultry, game, and fish, which probably was condemned because putrid. But it must be borne in mind that the City of London is a privileged place, that the inspection of meat and slaughterhouses is there carried on systematically, and that, as Mr. Fisher declares, much meat which could not be exposed in the City is sold openly in the suburbs.

In order to give a useful and practical turn to their labours, your committee, on one occasion, invited the inspectors of nuisances out of their several districts to meet Mr. Fisher and Mr. Pocklington at Dr. Dundas Thompson's rooms in St. Thomas's Hospital, in order that the appearances and characters of diseased meat might be explained to them from actual specimens, and that thus they might be prepared for the more efficient discharge of their duties.

Your committee then endeavoured to draw up a short summary of the marks by which unwholesome meat may be known, in plain, unprofessional language, for the use of inspectors of nuisances, as follows:—

" The chief marks which show that meat is unwholesome are, in the first place, its colour, which is generally either dingy or too bright.

" Secondly, there is the smell, which is peculiarly sour and sickening even when such meat is fresh, and very different from the smell of good meat when tainted through overkeeping.

" In the next place, there is a sign which is considered of more value than any other. It is a peculiar and decided wetness of the meat, which is also soft, flabby, and not set.

" Moreover, it should be noticed, that there is often a large quantity of blood in the veins, which has curdled there, and not run out as it does when sound beasts are killed. Or, if there are no clots of blood, there will be very likely shreds and flakes of white matter in the larger veins, particularly in the liver.

" Then, there is a whole set of signs which show that an animal, before being killed, was greatly out of condition; such as a pale, bloodless eye, a paleness of the ' bark' of sheep, and unnatural whiteness of the flesh, which are often seen in sheep which have the rot. Want of fat, and especially of the suet about the kidneys, in place of which a watery, flabby stuff is sometimes found, wasting of the fleshy part of the meat, and a watery, jelly-like state of the tissue which lies between the muscles, insomuch that drops of water may run out when it is cut across, are other decided signs. It is to be remarked, that drovers are said sometimes to strike heavy blows on the eye to hide the pale look which arises from wasting disease.

" Again, there are some signs of special disease. Thus, when cattle have died of a pleuropneumonia, or lung disease, the insides of the ribs will usually be found to be furred up with a quantity of white, curdy matter (pleuritic adhesions); and the same is found inside the flanks when beasts have died of inflammation of the bowels. In these cases, the natural smooth glistening surface of the membrane which lines the ribs and flanks is lost.

" One thing to be especially looked for is the little bladders among the flesh of pigs, which constitute the disease known as measles; and similar things in the liver of sheep which have the rot.

" Experienced butchers are said to know by the smell of meat whether the beast had certain medicines given to it before being killed.

" The above are the chief signs of unwholesome meat; of course they will vary with circumstances—for one animal may be killed at the very beginning of an acute disease, another after it has undergone considerable wasting, and a third may have been merely killed for appearance's sake, just before it would have died of itself."

Your committee must observe that, in speaking of unwholesome meat, they refer to the flesh of animals in a state of disease, and not to meat which has become putrid from having been overkept, nor yet to meat of second-rate quality. The flesh of old bulls, cows, ewes, and rams, for example, is not first-rate, but has nothing unwholesome in it. Moreover, all traces of previously existing but now extinct disease, such as old pleuritic adhesions, need not be regarded; for, as Mr. Fisher observes, if all marks of former disease were considered causes of seizure, the market would sometimes be entirely cleared. The presence of animalcules in the liver, if the sheep is not yet out of condition, is not considered sufficient cause of seizure by the inspectors, but your committee are not prepared to sanction the exemption.

There are several other cases, in which, according to the inspectors, doubt may exist whether meat ought to be seized or not; as in the case of a healthy animal dying by accident; and of cows which are just beginning to suffer from confinement in cowsheds; and of cows which die in calving, the fore-quarters of which exhibit no traces of mischief. But your committee think

that it is better to err on the safe side. Slipped calves are always seized, but the market is full of calves very little different, which are killed when very few days old, and sent up in abundance from the dairy districts of Somerset and Wilts.

It is quite certain that very much of this doubtful meat, together with large quantities of that which is certainly unwholesome, and especially slipped calves and measly pork, is made into sausages, and daily consumed by the public. Your committee have reason to believe that the flesh of horses (except the tongue) is not used, certainly not extensively used, for human food, simply because it fetches such a good price as cats' and dogs' meat.

Your committee have learned that most of the diseased meat supplied to the metropolis is brought from the country ; that is to say, that very few diseased animals are brought into or slaughtered in London, but that they are killed in the country by persons who make this a regular business. More unsound meat, according to the inspectors, is found in Newgate than in any other market, solely because more country meat is sent there. But there are persons, well known in the London trade, who make it their business to dispose privately of meat which could not be exposed openly in any market.

As for the distribution of this meat, there is no doubt that it is purchased after regular market hours, by tradesmen who retail it to the labouring classes late in the evening, in the suburbs of what are called low neighbourhoods. Much meat is sold by gaslight which could scarcely be exposed in broad daylight.

We must now touch upon the important subject of the ill effects of unsound meat. These are twofold. In the first place, the consumer is robbed of his fair share of nourishment ; for it is notorious that second-rate and unsound meat cannot stand the fire, and wastes in cooking to an extraordinary degree. Thus it is the most extravagant kind of food, and furnishes one example among the many that the poorest people always pay most dearly for everything.

In the next place, there can be no doubt but that the use of diseased meat may be a specific cause of illness. We need scarcely remind you that the eating of measly pork and of ill-cooked animal food in general is notoriously a cause of tape-worm and of various forms of hydatid that infest the human subject. Instances have come under the notice of Dr. Gibbon, Dr. Challice, and other members of the committee, of symptoms of poisoning arising from the use of unsound meat partially cooked. It appears to be almost established, that, in most cases, prolonged boiling deprives it of any active poisonous properties ; and it is said that the flesh of glandered horses, after being boiled, can be handled and eaten with impunity ; but roasting and frying are far less efficient means of subjecting flesh thoroughly to the purifying influence of heat.

We may allude in passing to the over-fed condition in which cattle are commonly killed at Christmas. Dr. Druitt has seen several instances of illness from eating that kind of meat ; but it is matter of gratification that excessive and unnatural fatness seems now to be less cultivated by breeders of animals.

Your committee may observe that, although it may be difficult to prove it by actual cases, they have no doubt that unwholesome meat is one cause among many of the debility and cachexies, the poverty of blood, and intractable maladies of the poor who flock to the dispensaries and parochial medical officers ; and especially of diarrhœa during hot weather.

But your committee feel that it is a question which must be argued on far higher ground than that of special ill consequences : they believe that public decency demands that a stop be put, so far as possible, to the sale of the flesh of diseased animals, and of those which have died a natural death. They appeal to that highest and best sanitary code contained in the law of Moses (Leviticus xi, 39, and xviii, 15), which they would willingly see observed at the present day.

Now, to treat of preventive measures :—Your committee, speaking with due caution on a legal question, believe that the sale of unwholesome meat is indictable as an offence at common law, and is also guarded against by several special enactments, which it may be useful to make known.

There is the act "to prevent the spreading of contagious or infectious disorders among sheep, cattle, and other animals," which was passed in 1848 (11th and 12th Victoria, chap. 107), which was extended and continued in 1853 (16th and 17th Victoria, chap. 62), and amplified with penalties against the sale and keeping of glandered horses, and which was continued in the present year by the act 19th and 20th Victoria, chap. 101. By this act it is lawful for any clerk or inspector or other officer of any fair or market, or for any constable or policeman, or for any other person authorized by the mayor, or by any two justices of the peace having jurisdiction in the place, or for any person authorized by Her Majesty in Council, to seize all sheep affected with smallpox. And, "if any meat unfit for human food be exposed or offered for sale in any market, fair, or other open or public place, it shall be lawful for such clerks, inspectors, constables, policemen, or other persons authorized as aforesaid to seize the same, and to report such seizure to the mayor or justice." The mayor or justice may order the thing seized to be restored ; and in this case, if there were probable cause of seizure, the officer seizing cannot be made to pay more than 2d. damages, or be fined more than 1s. ; on the other hand, should the justice condemn the meat, it is to be destroyed, and the person offering it to be fined 20*l*.

The City of London Sewers Act 1851, provides for the appointment of inspectors of slaughterhouses and meat, with most summary powers of entering and inspecting every place where cattle may be kept alive or dead, and of seizing and destroying any meat whatever which may appear unfit for the food of man. From this act and the foregoing, Mr. Fisher, the very able City inspector, derives his powers, and affords, as we have said before, considerable protection to the City at the expense of the suburbs.

The Metropolitan Market Act 1851, gives full powers over unsound meat to all clerks and inspectors appointed by virtue thereof.

The Nuisances Removal Act for England 1855, gives the local authority, or their officer or sanitary inspector, power of entering into all premises at reasonable hours to examine and inspect any carcass, meat, poultry, game, flesh, fish, vegetables, corn, bread, or flour; and if such things appear to the sanitary inspector unfit for food, the same may be seized; and if it appear to a justice that such carcass, &c., is unfit for food, he shall order it to be destroyed; and the person to whom it belongs, or in whose custody it shall be found, shall be liable to a penalty not exceeding £10, for every carcass, fish, or piece of meat, &c., and for every parcel of fruit, &c.

It has been represented to your committee, that the most efficient person to be employed as inspector of meat and slaughterhouses would be a man who is a butcher by trade. And this may be true; but your committee do not believe that such appointments are necessary, or practicable at pre ent.

They content themselves with recommending, that the several inspectors of nuisances, appointed under the Metropolis Local Management Act, be empowered to act as sanitary inspectors under the Nuisances Removal Act for England 1855, and if necessary, that they also receive authority from two justices, under the Act 19th and 20th Victoria, chap. 131, before referred to. They further recommend, that the inspectors be furnished with a statement of the appearances of unsound meat, such as your committee have drawn up for the purpose, and that they be instructed to visit the shops and markets frequented by the poor, especially on Saturday evenings; that they should proceed cautiously, and take the opinion of the Medical Officer of Health in case of doubt; but yet that they should peremptorily seize any meat which shall answer to the before-described signs of unwholesomeness.

So soon as the fact is made public that the inspectors are on the alert much of the evil will be abated.

The committee cannot conclude without acknowledging that they are much indebted to Dr. Druitt for his valuable services as secretary at each of their meetings, and they tender him their thanks for the communication of many important facts and for the drawing up of this report.

JOHN CHALLICE, M.D., Chairman.

SUGGESTIONS FOR INCREASING THE CIRCULATION OF THE BOTANICAL JOURNAL.

To the Editor.—Sir,—Having read all the works written by Dr. COFFIN, and fully believing that the farther the system of Medical Botany is promulgated the better it will be for society at large, I am desirous of casting my mite into the scale for the furtherance of the above object.

My mode of proceeding is this: I have in my possession the "Guide to Health," six volumes of the Journal, one copy of the "Lectures," one copy of the "Treatise," and one copy of the Journal, sent every fortnight; these I make a point of lending to persons that I think will read them; when one book has been read, I forward another, and so on until each party has gone through the whole, so that generally most of the books are lent out, and I can truly say that I am more than compensated for my trouble by seeing the manner in which these messengers of mercy are appreciated, and by the reception of the expressions of thankfulness being continually given.

Trusting that if you deem this of sufficient interest you will find it a place in your valuable Journal, I remain, yours obediently, A. C. F.

Old Kent-road, August 14, 1856.

SUBSCRIPTIONS FOR THE BOTANIC HOSPITAL.

G. J. Frost	£1	0	0
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Law Smith	0	2	6
Miss Tier	0	2	6
Miss Holman	0	2	6
Miss Bragg	0	2	6
Mr. M. Jones	0	1	0
Mr. Bachelor	0	1	0
John Shaw	0	2	6
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Mr. Batly	0	1	0
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A Friend	0	10	0
N. M.	0	2	0

NOTICE.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury branch.

NOTICES TO CORRESPONDENTS.

A. C. H.—Dr. COFFIN attends to and prescribes for all forms of disease, and all debilities, from whatever cause flesh is heir to.

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COFFIN'S
BOTANICAL JOURNAL
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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

No. 218—Vol. VII. SATURDAY, SEPTEMBER 20, 1856. Price 1d.

IMPROVIDENCE AND INTEMPERANCE.

Improvidence has not a little to do with intemperance. The drunkard generally cares not for the future: everything is sacrificed to present gratification. Though he should know that by spending his means upon drink now, he is depriving himself of comfort in time to come—that he may expect to feel the want of what he now wastes—yet the appetite is too strong to be restrained by such a consideration, and he goes on sacrificing all to that appetite. Were it not for intemperance, many a one who becomes the inhabitant of the poorhouse, might have a home of his own in which to spend the evening of his days, and a sum sufficient to keep want from the door, and to cover his table with comfort when unable to toil as now. All statistics go to prove that the great cause of pauperism is intemperance; that it is the wasting of their earnings in intoxicating drink that transforms many of our highly paid operatives, artizans and miners into a burden on the country, when they ought to be its blessing and its strength. Such a fact should tell upon all who desire to see the people happy and the nation prosperous, in inducing active efforts for the suppression of intemperance. We wonder often—seeing such a fact is so evident—that such a result does not follow: that instead of finding persons who would wish to be regarded as friends of the people, turning their backs upon our movement, which specially aims at their comfort and elevation, we do not see them in the front ranks of those who assail intemperance and all that leads to it.

But improvidence has another connexion with intemperance than that just mentioned. It tends to it, and fosters and cherishes it. There cannot be a doubt that, could we get the people to be more careful of their means—could we train them to the consideration of the future—could we engender and keep up amongst them provident habits—we should do much to hinder the prevalence of intemperance. In saying this, we are not forgetting many things which come to have their influence in leading from less to more, till the craving for strong drink gets a power which will sacrifice everything to it. But the very prevalence of such things requires that every proper means of lessening their power should be employed: and if improvidence gives them an influence they otherwise would not have, we, as temperance reformers, are called on to do what we may to engender and foster provident habits. It is a fact, that fewer of those trained to such habits go astray through drink. Such habits do not indeed always save, but they have a powerful influence in that direction. The way in which this ensues it is not difficult to perceive. To spend money in drink is felt to be a wasting of means—an unnecessary as well as a hurtful expenditure—a putting out in a foolish way what might be better spent, or laid up to advantage to meet "a rainy day," a time of dearth or depression of trade, or to provide for old age.

The effect of such training is seen in the household. Go into one dwelling and

you find all tidiness and comfort—food plain but good, with now and then a little luxury—children well clad and healthy-looking, and attending school—and when a time of depression comes, there is something to fall back upon. Enter the next door, and you find now a feast and now a famine, disorder and dirt, finery and filth; and when trade gets dull, and wages decrease, rags and wretchedness, destitution or debt. Whence the difference? It cannot be because in the latter case there is less to do with, for the wages are a half greater. It is that in the one there has been a training to carefulness and thrift, in the other there has been none. In the one case there are economy and care, and in the other there are improvidence and waste. Were it not for improvident habits, could there have been such a statement as we can assure our readers was made to us on this subject by a tradesman who employs a considerable number of hands? "I have in my employ three classes of working men. The first get about 12*s*. to 14*s*. a week, the second about 18*s*., and the third 30*s*. to 40*s*.; and it is quite observable that soon after a man has left the first class and gained higher wages in the second, he appears, in his dress and otherwise, to be the worse for it—the extra money has been spent in drink, not in the necessaries or comforts of life. And on any one from either of these classes joining the third, and getting the highest wages, his appearance is yet more strikingly the worse for it—his countenance and manners giving sad evidence of the manner in which his money has been spent." Such cases are by no means the exceptions. And this will appear clearly to be the case amongst the working classes, when we find that they spend annually, in the purchase of a hurtful and demoralising luxury, upwards of fifty millions sterling. It is surely time that something were done to stay such improvidence, and to induce other habits. The wide-spread existence of the weed makes the matter more difficult; but we have better ideas of the working classes than to conclude, that if the matter were rightly presented to them they would not —many of them, at least—give it their attention and adopt the preferable plan of saving what they could spare from their earnings, so that it might serve them in the future in any special emergency, or in the decline of life.

The thing has already been done to some extent. Persons who had not the advantage of any training to carefulness—who had been accustomed to waste their means—have been induced to open an account in the Savings' Bank; and, once begun, it has been carried on as they never thought it could, and that too when the influence of former habits had to be struggled against, and when temptations to squander their means were many and strong. It is a great thing, in such a case, to get a beginning, to have "a nest egg." There may be but little added at first, but every little helps. Ways of saving are found which were never thought of before. Shillings that were worse than thrown away, are laid aside to add to the little stock. A shilling or two on a Saturday night for liquor was thought nothing of, not worth the saving—a pleasant thing to spend with a companion for the sake of good fellowship. They could be spared, and why not spend them in that way as well as in any other? but a better method has been found, and it amazes them how the stock increases. It is felt to be far better to have the money in the bank than in the beer-seller's till—far better to have it to add a little to the comforts of home, to give the children a better education, to get a few books, to have the luxury of doing good with it, than to squander it merely for their own selfish gratification and the profit of the publican. And when this feeling once finds a place, there is a barrier raised to the wasting of money in drink, which is of a most powerful character. The individual rises in self-respect, and in the esteem of all whose good opinion is worth the having. Cases are not wanting in which such savings have been the beginning of a little fund, which, judiciously employed as capital, has led on to competency, and even to fortune. It were not difficult to find persons now in a high position who were, as some of us remember, hardworking artizans, and who owe, in a great measure, their present position to the provident habits which they had acquired and carried out. While they have risen, others have sunk. Com-

panions, with abilities far superior, have been lost. They spent as they gained—they laid nothing by. They were content if the day and the way met, though they might have realised, in time, a sum sufficient to start them in trade. And this improvidence laid them open to temptation. Not having any stock, they had no inducement to add, and so they went to the publichouse, and their doing so was their ruin.

Whilst spendthrift and improvident habits deprive their victims of both the means and the desire of an honest independence, it is remarkable, on the other hand, to what an extent the practice of properly husbanding their resources imparts to the hardworking sons of toil the determination to depend upon their own industry for support. It was observed a few years ago, by a gentleman in the North of England possessing ample means of information in regard to the subject, "that he never knew amongst the pauper class, one instance of a man who had, in the course of his life, saved and put by a pound, becoming a pauper."

It will be found that those who frequent the Savings' Bank do not often turn their feet towards the place that is "licensed to sell" intoxicating liquors. And if we could lead the people to the one, we should do not a little to keep them from the other. To stir up our friends to this is our present object. We would urge the committees of our various societies, and individual members, to use their influence in such a way. They will find that thereby they will greatly further the cause they have at heart. And sure we are, the influence they could use in this way is not small. There are few places in which Savings' Banks do not exist, and where not in operation one could be started with very little difficulty. But even supposing there were one in every locality, we would press the importance of *Preliminary Banks,* as in many places there now are—banks that would take pence as readily as pounds. Penny Banks have flourished, and do flourish wherever they have been started and conducted with any measure of efficiency. We know of one through which, in the course of a few years, there have passed several thousands of pounds, belonging to persons who had been accustomed to spend every half-penny they could get, and to be in misery; and the result has been the raising them to a higher position. The bank has been found a handmaid to the temperance society, bringing persons to it, and having the effect of keeping them true to their pledge.

In making use of Savings Banks, as we would have them used, it will not do merely to have a place at which money may be given in at distant intervals, and at times at which the money is not likely to be in hand—times till which it will require not a little effort to keep the money—but every facility must be afforded as to nearness to the residences of those for whose benefit it is intended, as to the days and hours when the money has just come into their possession, and in some cases, it may be, even as to calling for it. At all events, it must be an *easy* thing for them to hand it to the collector or treasurer—as easy, at the very least, as to go to the publichouse with it. We feel assured that many who have been accustomed to spend their money in the dramshop or the alehouse, might have it intercepted for them, and kept safe, and they themselves, by the very saving having been begun, kept from the drinkseller's altogether. We would have our friends TO TRY.

In such a movement we have greatest hope from the young. As we believe the temperance cause in its continuance and success to depend upon the securing of the young, so we believe, that if we would train efficiently and extensively to provident habits we must begin with them. It is in youth that the opposite habits are contracted. Hence our plea is for Penny Banks, in which the young may be encouraged to deposit their pence, instead of spending them foolishly, as many do, and thus initiating a practice which proceeds through various stages till it ends in drink. Many a penny has thus been deposited when such banks have been begun; and the boy has grown up into the lad, and will by and by advance, if spared, into the man, with feelings and habits which will tend greatly to keep him from the publichouse, and from intemperance. Our Bands of Hope and juvenile associations

ought all to have a well-wrought penny bank in connexion with them; and a well-wrought penny bank will have an influence alike *in bringing the young to our side, and in keeping them there.*

A single remark upon an effect of the cherishing of provident habits, more than once hinted at already, and we close. If habits of improvidence are still followed by those who join our societies, we have little confidence, comparatively, as to their keeping steadfast. The money may not at first be spent in drink, but the improvidence continuing will lay open to temptations to partaking of it which would not exist if the habit were different. If habits of saving have been begun and cherished, there is *a strong collateral influence brought to bear* which has a powerful tendency to keep from all indulgence, all company, and all conduct which would issue in a visit to the publichouse. It has universally been found, that as abstinence from intoxicating drink has helped the Savings' Bank, by increasing the number of depositors, and enlarging the funds at their disposal, so the growth of such a stock in the bank has had its influence in keeping them steadfast to abstinence. In the very nature of things it must be so. We know some instances of abstinence societies based on the savings principle, and they work well. Every member of the society *must* be a depositor, and if he violates his pledge he forfeits so much of the amount which stands to his credit. Whether such a scheme be fit for general adoption we will not take upon us to say; but of this at least we are sure, that by giving all facilities for the members of our societies laying up, at good interest, what they could save from their earnings, and using our influence to persuade them to do so, we are doing not a little to further those feelings, and to put those who cherish them in the position which shall strengthen their attachment to our principles, and lead to strict and continued adherence to the practice of total abstinence from all that intoxicates.—*Bristol Temperance Herald.*

Nothing is more common than to find men whose works are now totally neglected, mentioned with praises by their contemporaries, as the oracles of their age, and the legislators of science.

A FEW WORDS ABOUT FRUIT.

IN TWO CHAPTERS.

Chap. II.

Having seen, then, why fruit comes at a particular season of the year, and that it is of direct and important service to us, to make use of it, as it so comes, let us now cast a glance over the different and grateful varieties of natural confectionary, and note a few of the ordinary qualities of each. But as we have hinted at the injudicious periods of the twenty-four hours generally adopted to eat fruit, it may be expected that we should say what are the judicious hours for such enjoyment. Generally, it may be laid down, that morning and evening are the times most suited to a repast of nature's "ready-prepared." At breakfast it is often very suitable, and as a luncheon or "snack," two or three hours before dinner with a slice of dry bread, or, as a supper, about an hour or two prior to bed-time, it is invaluable. Supposing also you come in from a fatiguing walk, and although hungry, yet in by no means a good condition for feeding, on account of exhaustion, a small dish of fruit, a crust, and a glass of water will be found one of the most judicious and renovating means you could adopt.

Stone fruits have been and are still denounced as the most dangerous, and almost every one has dreadful visions of cholera, diarrhœa, &c., that flit across his imagination at the mere exhibition of them on the fruiterer's stall. We admit that, generally speaking, stone fruits are more indigestible than others, but only to those whose digestive powers are not in proper order, and the name of this unhappy class of our fellow creatures is truly—legion. But then to these unfortunate ones, certain of the vegetables, and certain of the varieties of flesh or fish food, are just as bad, and a dinner of veal, pork, or salted beef would quite as readily upset them; so that, after all, we do not participate in the absurd cry against stone fruit. There is one reason, however, for the prevalence of this notion of the noxious qualities of plums, &c., namely, that people, notwithstanding their abuse of the plums, and their terror of them, are in such a hurry to get them,

that plums, greengages, &c., are hurried in to the market long before they are fit for gathering, much less for eating. Indeed, it is so with almost all things now-a-days: there is such competition, such a feverish anxiety to be first in the market, such an absurd fashion for having things *early*, that the stomachs of the lieges get disordered and disgusted with the very things nature meant for their use and delight.

Perhaps, then, of all fruits the plum kind will least bear this unnatural and unreasonable treatment; and if we will eat them before they are fit for eating, we must lay the fault on ourselves, and not on the fruit.

As a rule, the skin and stones of all fruit are utterly indigestible, and should never be swallowed; and a piece of leather would have a better chance of dissolution in the gastric juice of the stomach, than they, for they cannot be dissolved by it. The hard pulp of certain plums, indeed, has been known to pass from the body in a state little altered from its original condition; but this could scarcely have happened, we imagine, had not the stomach been weak and incapable of vigorous action, or the plum been unripe. In the case of children, and others, whose stomach and bowels are in healthy activity, we have abundant evidence of the non-dissolution of skins and stones of fruit, for they pass away entirely unchanged; and we can easily understand why, in the case of the weak and debilitated, the intestinal canal being unequal to expel such unusual and undissolved deposits, these should be the cause of uneasiness and sickness. Perhaps of all stone fruits the peach and apricot are the most delicious and most suitable for all stomachs, while the nectarine, equally tempting, disagrees with delicate digestions. Cherries are still less suited to weak persons, unless the skins and stones are carefully rejected, a task, as regards the skins very difficult to perform: moreover they contain a large amount of acid. The small-seeded fruits, strawberry, raspberry, currant, gooseberry, grape, &c., are by far the most suitable for the majority of persons, who, however, should take care to reject the stones and skins of the latter; and though this, in the case of red and white currants, might be difficult, the tough skin of the black currant need not and should not be swallowed. The apple and pear kind is a very wholesome class of fruit, is less liable to fermentation, or, at any rate, to hurtful fermentation, in the stomach; but, as the texture is firmer, it requires a longer time to digest than most other fruits. Of foreign fruits we will only mention one or two. The orange may be allowed to the most dyspeptic, and is pre-eminently the luxury of the invalid; but the skin and interior pulp should never be swallowed, for doing so often produces the most dangerous and sometimes fatal results, even in healthy systems. The melon, pineapple, &c., though most delicious, generally prove most unsuitable when incautiously eaten too freely; as, indeed, are most of what are called the cucurbitaceous sorts, which, if eaten, should be sprinkled with pepper and salt.

But while in their natural condition, care has to be taken in the use of fruits, according to the states of digestion, which through our irrational and wilful modes of feeding, are as various as the individuals themselves, yet, in a cooked condition, all fruits that are ordinarily so treated, lose their properties, which become hurtful to the dyspeptic, and can be taken not only with impunity, but with benefit. And with respect to the mode of cooking, the pie, pudding, or tart is the most usual method: of this we do not disapprove, provided, that when the fruit is thus prepared, it alone be eaten, and the crust or pastry thrown away. "What is the use, then," exclaims the good wife, "of going through the troublesome labour of making a good crust?" Not a bit of use, ma'am, but on the contrary, a vile insult and injury to that incessantly abused thing we call appetite. Wholesome as is the cooked fruit, its good effects are, in ninety-nine cases out of a hundred, utterly neutralized by its accompaniment of butter, compressed flour and eggs, called a light crust—a term constantly contradicted by the declaration of the feeder, that it lies *heavy* at his chest. The only proper cooking of fruit is to stew it, and then, eaten either hot or cold, or as a preserve, it is wholesome and very beneficial.

Dried fruits, such as raisins, currants, dates, &c., are not wholesome, at least to dyspeptic subjects, and, indeed, from the impossibility of rejecting their skins, are not capable of complete digestion by any one, and moreover the quantity of sugar they contain, disposes them to quick fermentation.

Though somewhat late in the season, we trust our few words about fruit may not be useless to our readers.

WILD FLOWERS OF THE YEAR.

SEPTEMBER.

"Summer ebbs—each day that follows
Is a reflex from on high—
Tending to the darksome hollows,
Where the frosts of winter lie.

He who governs the creation,
In his providence assigned
Such a gradual declination
To the life of human kind.

Yet we mark it not: fruit reddens—
Fresh flowers blow as flowers have blown;
And the heart is loth to deaden
Hopes that she so long hath known."

WORDSWORTH.

ONE by one the blossoms of midsummer have disappeared; and though some, like the golden ragwort, are as bright as ever; and though others, more delicate than this, still bloom for us in some sheltered nooks, yet it would be an easy matter to count the species of flowers which open, for the first time, to the sun in September.

The tall and handsome golden rod *(solidago virgaurea)*, with its crowded clusters of flowers, does not unfold for the first time in this month, for it begins to bloom even as early as the end of July; but it may be found in great perfection from now till the end of the year. It grows in woods and thickets, and is often planted in shrubberies. It was once supposed to be a cure for wounds. It was brought, in a dried state, from the woods of other lands, and sold in the London markets by the herb-women of Queen Elizabeth's days; and, about that time, it was first discovered to grow wild in Hampstead woods. Botanists were not so numerous then as they are now; and this must account for the fact, that a flower which grows wild in several English counties had never previously been supposed to be indigenous. Fuller —who, in enumerating the "Worthies of England," introduces them to his readers, by an account of the vegetable productions of their native counties—speaks very highly of the golden rod, and censures its disuse:—"Some maintain," says he, "that every county cures the diseases which it causes, and bringeth remedies for all the maladies bred therein. An opinion which grant not true, yet may have much of truth, seeing that every county of England especially affordeth excellent plants, were it not partly for men's laziness that they will not seek them; partly for their ignorance, that they will not know them; and partly for their pride and peevishness, that because, when they are found, they disdain to use and apply them." He adds, that while the golden rod was brought, at great expense, from foreign countries, it was highly valued; but that it was no sooner discovered to be a native plant, than it was discarded from use. Its bright yellow flowers have found for it an introduction into our gardens, and several of the species which we cultivate grow wild on the few green spots which lie about the rocky island of St. Helena.

The common flea-bane *(inula dysenterica)*, a star-shaped flower, as large as a guinea, and of as bright a hue, is very frequent now on moist lands throughout England; and we may be sure, when we find this in our country walk, that some quiet river, or stream, is gliding through the landscape. This flower is commonly called wild marigold, and it received both its familiar and scientific names from the belief that its odour was repulsive to fleas, gnats, and other insects. It seems strange that it was considered as obnoxious to insects, and worn about the person, or hung around the bed as a terror to them, while, in our days, its efficiency is totally denied. The Arabs extol this plant very highly, as a remedy for wounds. One of those traditions which a wandering people transmit from generation to generation records that this bruised flower was used by Job, as an application to those grievous diseases which he so pathetically laments. Hence the flea-bane is called by the men of the desert "Job's tears." Its stems and leaves are of a woolly texture, and of a whitish-green colour.

But directing our attention to the

sandy shores or the salt marshes of the sea, we shall find a few autumnal flowers. The marsh mallow *(althæa officinalis)*, formerly called Moorish mallow, or white mallow, is not uncommon on salt shores, either of the sea or river. The name *althæa*, to cure, was given to it for its healing properties, which were well known both to medical practitioners and to country people. The flowers are very pretty, of a delicate rose colour; the leaves are very thick, and both surfaces are so soft and downy that they resemble a piece of thick silky velvet. Both leaves and root contain a great quantity of mucilage, which, in France, is made into a kind of paste, and forms the lozenges well known on the continent by the name of *Pâte de Guimauve.*

The Michaelmas daisy, or blue camomile *(aster tripolium)*, though never, in our country, found on inland spots, is very frequent near the sea, or salt river. It is often called sea-starwort and blue daisy. It grows about three or four feet in height, and its lilac flowers are in bloom from August to November. Ancient writers on flowers reported of this, that it changed its colour three times a-day; hence it is termed *tripolium.* The Greek writers stated, that it was white in the morning, purple at noon, and crimson in the afternoon. An old English name of this flower is hog's bean; because its root, which is shaped like a bean, is eagerly rooted out and eaten by swine.

The common sea-wormwood *(artemisia maritima)* is in blossom now, on salt marshes. This is not the wormwood once worn as a charm against ague. The species thus reverenced is that generally called mugwort *(artemisia vulgaris)*. It is a well-known plant of waste places and hedge-banks. The upper surface of its leaf is of a green as dark as that of the old ivy leaf, but it is quite white and cottony underneath.

The mugwort had, according to old writers, so powerful a spell, that the wayfaring man, who bore a branch of it about him, felt no fatigue. A species of wormwood is cultivated in some parts of Surrey for its seed, which is used by the rectifiers of British spirits; and our common mugwort is used, instead of hops, in the beer of Sweden.

And now, again, the fields are green with the after-grass, which springs up after the hay is cut down. The exquisite verdure given by the grasses to the fields, making the pastoral landscapes of England among the most lovely spots of earth, would lead us highly to value this important tribe of plants, even were they of no other use. The beneficence of the great Creator, in adorning the earth, is too little thought of. His goodness is recognised in providing us with plants for food and clothing, for shade and shelter; yet how seldom do we thank him that he has made the meadow green, and scattered the blossoms of beauty on every path. And yet how much real enjoyment is derived from the loveliness of the landscape! God might have provided for all our wants, and yet have placed us in a land destitute of beauty; and, surely, the profusion of the summer-flowers and the bright verdure of earth should make us not only glad, but grateful too.

In the grass tribe are included all the corn-plants, the sugar-cane and the useful bamboo. When we consider that, in every land in which the corn-field exists, the flour procured from it constitutes the staple food of man, we form some idea of the value of this tribe; and though the South Sea Islander may live on his bread-fruit tree, and the New Hollander, too idle to cultivate his land, may enjoy the produce of his native sago-palm, or the large root of the arum; yet this food can be procured in few climates, while corn can be cultivated on the greater part of the globe. When we see the multitude of cattle enjoying the liberal supply of food spread over the green pastures, and when "the hay appeareth, and the tender grass showeth itself, and the herbs of the mountains are gathered," we see again, though indirectly, that the grass groweth for the service of man. When we behold how the grass, by its matted roots, binds down the sands which else would be floating far and wide, we have another instance of its value. In the Hebrides, the shore grass *(arundo arenaria)* is made into ropes, and bags, and hats. The grass oil of India is highly valued for its aromatic properties, and the fragrant scent of our native meadow grasses, when they lie withered in the sun, is delightful

to the wanderer in the hay-field. The sugar-cane of the west, and the bamboo of the east, are alike valuable. The native of Asia eats the soft shoots of the bamboo as we eat asparagus. The hollow joints yield him a refreshing drink; its seeds are eaten as a delicacy; and a decoction of its leaves furnishes him with a medicine. The large stems are used for baskets and pipes. Its leaves are made into fans and coverings for roofs; and from the plant, in various ways, are procured paper, writing-pens, furniture for houses, and every variety of domestic implements.

It is a circumstance worthy of remark, in our meadow grasses, that they possess the same properties for food as those which we cultivate in our corn-fields. The smaller size of the seeds renders them unsuitable for culture; or bread, or malt, might be made from seeds of the common grass. There is, indeed, a great similarity in all the plants of the grass tribe. Every one of them contains sugar, and each one has on its stem a coat of flint. After the burning of a hay-stack, pieces of glass have been found lying on the ground around it, which the fusing properties of fire have converted from flint to this substance. The straw of barley is said, by professor Lindley, to be melted by fire in a glass of a topaz yellow colour; and a wheat straw is stated to furnish a colourless glass, when fused by a common blow-pipe. One grass only is deleterious. The darnel *(lolium temulentum)*, when mingled with flour, is unwholesome; but Lindley considers that its injurious effects may have been greatly exaggerated.

That singular flower, the meadow saffron *(colchicum autumnale)*, may be found both in this month and in October. It is a purple blossom, in shape resembling the common crocus. The singularity of this flower consists of its blooming in autumn, while its leaves and fruit appear in the spring following. About the end of October the flower dies away, and no one, on looking at the plant, would observe any indication of its seeds. Yet these lie buried in the bulb while winter snows are around and above it; but when the sun and showers of spring bring forward the early flowers of the meadow, the seeds rise up, ripen during summer, and in autumn produce the saffron flower. The colchicum is a powerful medicine. No cattle will touch the fresh plant; and the idea that it is fatal to dogs originated its French name of *morte aux chiens*. It probably, when made into hay, loses some of its noxious property, for it is very abundant on the high lands of Italy, and is regularly cut down, on the Alpine pastures, with the summer grass. With us it grows pretty generally on the pasture-lands of the north-western counties.

ORACULAR BLUNT'S DESCRIPTION OF DOCTORS.

The turf had grown green over the breast of my beloved friend, before I stood again in the Bubbleton pulpit. I had become worn down, in body and in spirit, by the incessant cares and troubles that attended me through the winter; and the exertions I had found it necessary to make, during the last few days, brought on an illness, that prostrated me for some weeks.

I was taken sick at the house of Brother Oracular Blunt, and that excellent man would not hear of my leaving the genial shelter of his roof. He was not content with placing all the comforts of his home at my disposal, and furnishing me with a nurse in the person of his kind companion; but actually became my physician, and attended me with a skill that almost equalled his devotion. His collection of medicines was by no means immense, and there was, consequently, the less danger in submitting to his treatment. The names by which they were known, moreover, were singularly intelligible, though I much fear that the fact may derogate from the medical reputation of my friend, it being one of the popular conditions of the efficacy of drugs, that they be christened in an unknown tongue.

It was one of Oracular Blunt's eccentricities, to be inveterately opposed to the medical faculty.

It was his boast that he had never lain at the mercy of a doctor, since he "attained to years of discretion," or came to the knowledge of good and evil. Nature abhors such intermeddlers, he said, as a great artist would the haphazard stroke of a blind man's pencil, and will not act

in conjunction with those who mar her perfect work. He affirmed that there is a physical as well as a moral idolatry. The true religion of health consists in being loyal to nature; its corruption consists in withdrawing our first allegiance, and "going after strange gods"—which are the doctors! We are suffering, bodily, what the Jews suffered who began to serve Baal and Moloch—we are tantalised, tortured, immolated; and, after all, the gods to whom we defer and sacrifice render us nothing but evil.

"Last summer," remarked Oracular Blunt, "I was taken ill, in New York, of bilious fever. I was stopping at one of the hotels. It was the hottest part of the season. Of course, it was expected that I would want a physician; but I forbade, at once, the mention of such an idea, and announced that I should take care of myself. I prepared my simple remedies, and securing the co-operation of one of the waiters, began to fight the fever.

"For some days it baffled my science, and no wonder; for the whole city glowed like a furnace, under the midsummer heat, and the noises of omnibuses and processions and screaming bands of music, made my room nearly as intolerable as Pandemonium. The landlord began to express concern for me, and finally a doctor, who chanced to be boarding at the hotel, forced himself into my presence. I told him that I did not require his services, but he clung to me like a leech, as he was. If I was not able to pay him, he said he would attend me for nothing—as if to be killed gratis were any inducement for one to resign his life! At last, I had to order him out of the room; and he went with a longing sort of glance, as if he coveted my frame for the experiments of his abominable trade.

"Well, within two weeks, I recovered and came home; whereas, if I had given myself up to that doctor, and taken all execrable things he might have administered under the disguise of his bad Latin, I should either have been the victim of slow poison, for the rest of my days, or been made a candidate for dissection, at the end of six weeks.

"Now, Brother Chester," added Mr. Blunt, "I am going to defend you from destruction, as I defended myself. Having fought, victoriously, the beasts of Bubbleton, as Paul did those of Ephesus, you must not be allowed to perish, here in D——, by the wise blunders of our good Dr. Quackeryhash. I say nothing against the man, as a citizen, or neighbour; but I should be like that worst of assassins who betrays his own guest, if I permitted him to approach you, in his professional character."

And so Oracular Blunt himself became responsible for my treatment, as I had already stated, and I had no reason to lament the exclusion of Dr. Quackeryhash.

LONDON ATMOSPHERIC INFLUENCES.

The smoke of our manufactories (says the Registrar-general) has been rendered, by Lord Palmerston's Act, less dense than it was. It will ascend as dark as ever in winter from the fires of 340,000 houses; but Dr. Arnott has shown that the evil may be greatly diminished, and by the mere modification of lighting the fire from the top much of the smoke is burnt.

The dust of the principal streets, which are now covered with horse-dung, watered every day, and beat up by omnibuses, may be got rid of by frequent cleansing and by new processes. The railways which traverse the southern, the eastern, and the northern parts of London would, if extended to the centre and the west, not only relieve the thickest thoroughfares, but facilitate the movements and the traffic of the population, dwelling in houses which it was computed at the last census could be all visited by going over something more than 6,563 miles of ground.

The third class of atmospheric impurities is invisible, but it arises from the long retention of the excrement of London under the houses and in the sewers. According to the estimate of Mr. Lawes, London could supply the farmers of England daily with 29 tons of ammonia, 51 tons of carbon, 14 tons of phosphates, 32 tons of mineral matter, and 14 tons of other matter, making in the aggregate 140 tons of dry manure, dissolved naturally in about nineteen times its weight of water. The country requires this precious manure, which London is so anxious

to get rid of at any reasonable cost, as it is now known to be as insalubrious as it is offensive.

The problem for the engineer to solve is, how can 3,000 tons of town guano be returned daily to the disinfecting soil from which it was chiefly taken, with the least offence to health, and with the least cost? Shall it be distributed by pipes, or by railways? Shall it be disinfected by water, earth, ashes, or any chemical compound?

Under the recent arrangements some hundreds of thousands of tons of this matter lie in store in London, putrefying in cesspools and percolating the streets, while the residue is thrown into the Thames at great cost. All these impurities of the air we breathe in London have evidently a natural tendency to increase more rapidly than the population, and can only be removed by the vigilance, intelligence, and energy of the Board of Works. Every substantial sanitary improvement they effect will be as evident as the diminution in the mortality of the districts which now receive a purer water, and which will, it may be expected, ere long, receive it on the system of constant supply.

DOMESTIC MANAGEMENT.

"I WONDER not at *that man* going to the publichouse, when he has such a home." This is a remark often made, and there is room for it. Many a working man's home is in such a condition, that it is no wonder he is glad to go elsewhere, even when his own feelings would induce him to stay with his family. The cause of this is to be found greatly in the want of domestic management, on the part of his wife. And, don't imagine that, in order to this state of things, that wife must necessarily be a drunkard. She may end in that, but she is not that at the beginning, and she may never become so. But in the circumstances there is not a little danger that her husband will. We do not blame the wife, in many instances. There *are* careless wives—wives who from the first have had no desire to keep their home tidy, and their husband comfortable—who would rather gad about, visiting their neighbours, and gossiping with them, than stay at home, and do what they might to make home worthy of the name to their bread-winners. But many wives, who have become such, have passed through a similar course. Their gadding about is not from original indisposition to stay at home, and do domestic duties in the absence of their husbands, and have all snug for them when they return, but from their having failed in that, and having become, in consequence, careless about it, giving it up in despair.

We don't blame the wives so much as many do. We blame their circumstances. They have never seen the thing, they have never learnt it, and it is scarcely, therefore, to be wondered at that they cannot do it. Many a young pair go together with the hope of comfort, who soon fail to find any; and with the idea of a happy home as a lode-star before them, who too soon learn there is no likelihood that happiness will take up her habitation with them. They are full of affection towards each other, and they are resolved to do by each other as they ought. They begin housekeeping, but the wife knows little or nothing about it. She has to learn her first lessons in it when she is called upon to discharge its duties, according to her station. She has been a mill-girl, or engaged in some employment which has engrossed her whole time, and prevented her acquiring the simplest elements of knowledge how to keep a house, to cook the plainest diet, to make or mend her own clothes, to take a stitch of her husband's linens, or even to darn his stockings. Had she possessed opportunities of learning, she might have been a notable housewife, keeping her home in good order, herself neat and tidy, her husband's clothes in a state of decent repair, and able to prepare a meal, which, if plain, should yet be as well cooked and as scrupulously clean as that on a nobleman's table. But can *she* be blamed? For the sake of her earnings she was sent, at the tenderest age, to the factory, or the workshop, and if she had an hour at night, she had no heart to learn anything, had it been in her power. But, in fact, she had not the opportunity. She was not taught. If she got any instruction, it was not of a kind to fit her for the place she now holds. She has a couple of children, and she has just as little knowledge of managing them. They are her pride, and her husband's too.

They are clad from a clothes-shop, where things can be had ready-made. She manages, while there are but two of them, to keep them in somewhat of respectable trim; but alas for the time when there are more! Even the two are often far from being in the condition in which they might and ought to be. Again and again she is not able to have them tidy ere their father comes. And, oh! what cooking! if such it can be called. There is much more material used than is necessary. It is a miserable mess, and often it can hardly be eaten; or, in order to a decent meal, recourse is had to something easily cooked, but very costly. We are drawing no fancy picture when we say, that, in consequence of such things as are above hinted at, there is a vast amount of discomfort in many of the homes of the working classes, and that, as the result of that discomfort, there is a resorting to the publichouse, and a learning of habits of intemperance. It is no marvel that a man who has been hard at work for ten hours or more, if on coming home he find an untidy wife, an unswept hearth, ill-cooked food, and dirty, squalling children, should have his temper tried more than he well can bear, and should hurry to the tavern, where a cheerful fire, jolly companions, and an exciting beverage, make him feel comparatively in the possession of bliss.

No one who has given attention to the state of our working population, can fail to have found such things prevalent amongst them, and consequently intemperance produced and fostered. The fact is, that such a state of things is greatly on the increase. Such marriages as those have taken place to a considerable extent within the last thirty years, and the children of such marriages are worse off than their parents were, as to any instruction in domestic matters. Thus the evil must, in the very nature of things, become more extensive and injurious. We, temperance reformers, must look at this, if we would have our movement to go on. If home be not made as attractive as the publichouse—if, instead of being attractive, it be positively repulsive—we can never make head against the evil with which we contend, *and home never will have the attractions it might and ought to have, unless the wives of the working classes be trained to the right discharge of their domestic duties.*

(To be concluded in our next.)

THE ADULTERATION OF FOOD.

The report of the committee appointed by the House of Commons last session to inquire into the adulteration of food, drink, and drugs, has just been published, together with the evidence taken; it forms a very voluminous document, extending over 300 pages. The substance of the committee's conclusions and recommendations may, however, be compressed into a small space. They examined a large number of witnesses, comprising both men of high scientific attainments and of practical knowledge as dealers. Though there was considerable difference of opinion as to the extent of the adulteration practised, the committee cannot avoid the conclusion, that it does widely prevail, and that injury to the public health, great pecuniary fraud, and much damage to the commercial morality of the country, ensue from the practice.

The principal articles of food adulterated are the following:—Arrowroot, with potato and other starches; bread, with potatoes, plaster of Paris, alum, and sulphate of copper; bottled fruits and vegetables, with certain salts of copper; coffee, with chicory, roasted wheat, beans, and mangold wurzel; chicory, with roasted wheat, carrots, saw-dust, and Venetian red; cocoa, with arrowroot, potato-flour, chicory, and some ferruginous red earths; cayenne, with ground rice, mustard husk, &c., coloured with red lead, Venetian red, and turmeric; gin, with grains of paradise, sulphuric acid, and cayenne; lard, with potato-flour, mutton suet, alum, carbonate of soda, and caustic lime; mustard, with wheat-flour and turmeric; marmalade, with apples or turnips; porter and stout (though sent out in a pure state from the brewers), with water, sugar, treacle, salt, alum, coculus indicus, grains of paradise, nux vomica, and sulphuric acid; pickles and preserves, with salts of copper; snuff, with various chromates, red lead, lime, and powdered glass; tobacco, with water, rhubarb, and treacle; vinegar, with water, sugar, and sulphuric acid; jalap, with powdered wood; opium,

with poppy capsules, wheat-flour, powdered wood, and sand; scammony, with wheat-flour, chalk, resin, and sand; confectionary, with plaster of Paris, and other similar ingredients, coloured with various pigments of a highly poisonous nature; and acid drops, purporting to be compounded of Jargonelle pear, Ribstone pippin, lemon, &c., with essential oils containing prussic acid or other dangerous ingredients.

They report also that adulteration of drugs is extensively practised; and in regard to drinks, they conclude that the intoxication so deplorably prevalent is, in many cases, less due to the natural properties of the drinks themselves, than to the admixture of narcotics, or other noxious substances intended to supply the properties lost by dilution. They state, moreover, that the poorer the district, the greater is the amount of adulteration.

The committee then inquired into the laws which existed on this subject in other countries, especially in France, Belgium, Germany, and the United States. In all these countries they found that means were employed by the government to detect adulterated articles, and that when discovered the vendors were severely punished by fines, imprisonment, and in Prussia by bodily punishment. They describe the present state of the law in this country, which gives redress to individual consumers by action, and, if the injury be general, by indictment, by summary charge before a magistrate, and by proceedings instituted by the excise. Some of these are represented as cumbrous, costly, defective; and the committee are of opinion, it would be most desirable that in all cases of the sale of an adulterated or fictitious article, a cheap and easy remedy, by summary charge before a magistrate, should be afforded to the person upon whom the fraud has been practised. As a means of detection they recommend that municipal or other local authorities should be empowered to appoint an officer or officers, who, on complaint made, or in cases of reasonable suspicion, shall procure portions of any article supposed to be adulterated, with a view to their examination or analysis by some duly qualified person appointed for the purpose. If the report of such person confirms the suspicion, a summons shall be issued and the case investigated before justices, who shall have power to inflict summary punishment and to publish the names of the offenders.

They recommend, also, that one or more scientific analysers should be appointed under the authority of the Board of Health, to whom the local authorities may refer suspected articles.

BATHS AND BATHING.

For the purposes of ablution and cleanliness, especially in persons who are not in the habit of employing the other forms of bathing, the warm or tepid bath, with soap and subsequent friction by coarse towels, is most suitable. As a general tonic or invigorant, sea bathing is probably superior to any other; but when there are no opportunities of enjoying the sea bath, as during winter, and in private houses in large towns, the shower bath, cold plunge bath, or even cold sponging, is an excellent substitute. We cannot too highly recommend the use of cold sponging of the body every morning, accompanied or followed by friction with the flesh-brush, hair-gloves, or coarse towel: we are convinced that this simple practice would save many a physician's fee, especially to the fair sex. Were the value and principles of bathing fully recognised and acted upon, each home might become its own hydropathic establishment; instead of the "cold-water cure" becoming occasional, and only had recourse to in states of disease, we should have it regularly employed to preserve health and avert disease—*Scottish Review.*

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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EMPLOYMENTS AND PURSUITS IN REFORMATORIES.

Philanthropy has long manifested its active and kindly power in this country, in forming societies for breaking the fetters of slavery, and spreading the benefits of civilisation among the degraded tribes of men on distant shores. It has also raised schools for the uneducated poor, almshouses for the widow and the aged, and hospitals for the sick. These are some of the doings of philanthropy in days gone by, and they continue to the present day. But it is only within the last few years that any special efforts upon a large scale have been made for the reformation of the convicted felon and his unhappy offspring. History tells us of some isolated instances of benevolence in this direction, some by John Howard, and others by Mrs. Elizabeth Fry—names which are the pride and glory of our land. Their memoirs and moral influence have no doubt largely contributed to bring into action the philanthropy which is now developed in the Red Hill Reformatory, and similar institutions. The principles and working of these asylums, as far as we have been able to examine them, deserve the highest commendation. And though they are yet in their early stage of operation, the results have in all cases equalled and in some excelled the hopes and expectations of their founders and patrons. The inmates of these institutions are brought under a system of physical and mental training which cannot fail to exert a salutary influence on their future character and history. Habits of industry, honesty, sobriety and religion are here formed, so that when these reclaimed outcasts leave the institution, they are, to a great degree, fortified against temptation.

A difficulty may sometimes arise in obtaining suitable situations for those who are about to leave the institution, chiefly arising from a certain amount of distrust in the minds of those who could employ them. It is therefore desirable that the amount of training should be directed to as many trades, arts or pursuits as possible, that the candidates for situations may have the greater number of chances of obtaining employment suitable to their condition and qualifications. It would be advantageous to these institutions if lectures on Medical Botany were delivered to the inmates while they were trained to grow and cultivate the most useful herbs which can be reared in this country. Were Dr. Coffin to be introduced to lecture, and to initiate some in the practice of his system, the expenses of the asylum would be reduced, and some of the youths or girls might be trained to be the successful medical advisers of the next generation.

The art of swimming might also be advantageously taught in these institutions. From what we have lately seen and heard on different parts of the coast, we believe that teachers of swimming might obtain a very good income. This art, if so acquired as to qualify to teach, would make the boys and girls valuable for sea service, should they see it to their advantage to make any engagements in that direction. But, if not, they might find employment in this country, for the art of swimming is now more highly

valued than at any former time. We are not to estimate the country's appreciation of this art, by the reward Miss Ingram received for saving the lives of two men at Margate, but by the censure the press has so freely expressed at the meanness of the men who insulted the heroism of Miss Ingram when they offered the paltry acknowledgement which she had spirit enough to refuse. She received an insult as her only reward. The celebrity acquired by Grace Darling would no doubt, if properly presented to the minds of girls in these refuges, inspire some of them with ambition to imitate her example in times of peril. Her heroism arose greatly from the experience she had had in plying the oar, and combined with compassion to her fellow creatures in danger. Independently of knowing the art of swimming as a means of obtaining a living, it would greatly promote habits of cleanliness. Cleanly physical habits have no small influence in promoting purity of thought and feeling. A thoroughly clean individual, it has been said, is never wholly depraved. Those who are taught to make independent efforts to keep themselves above water, are not so likely to sink as those who are always relying upon some extraneous help.

We have merely ventured to throw out a few hints on this subject, in the hope that others may take them and enlarge upon them, so that the system of training in our reformatories may be extended and improved; fully convinced that, as with the body, varieties of food greatly conduce to its health and vigour, so varieties of employment for the mind aid the development of its several faculties, give it full occupation, and prevent the intrusion of vicious and degenerating thoughts. This last advantage cannot be too highly appreciated in reference to those whose earliest associations are tainted, if not deeply dyed, with every modification which vice and crime can assume. From these reformatories, if they are judiciously conducted, and are not trammelled in their operations by any stereotyped discipline and administration admitting of no improvement, we confidently expect that many will come out exemplary in virtue, enterprising in commerce, and generous in works of philanthropy and compassion.

DOMESTIC MANAGEMENT.

(Concluded from page 143.)

Were it in no other way, the want of such management tends to the discomfort of home in what is actually a *wasting* of the husband's earnings, though not meant to be so, and in the incurring debt thereby. Consequent upon such ignorance, there is an inability to decide as to how the wages may be spent to most advantage. The mode of purchase, the things bought, the quantity got at a time, and the right use of them when procured, are more or less in fault; and an income, which, if rightly spent, and if what was bought with it were rightly used, would keep all comfortable, is found utterly insufficient, and a debt is contracted, which becomes increasingly heavy, and presses down and keeps down; and when debt has such a beginning and ongoing, drinking will soon follow. We have had opportunities of examining the books of grocers and provision-merchants, whose customers were amongst the working classes, and of hearing from their lips how matters stood with them; and we have found, in many instances, that the items were for articles which good housewives would not have ordered to any great extent. There was manifestly indicated an attempt at good living, with as little cooking as possible. One thing we found almost universal, in such cases —the passbook system. What was got was on the faith of the wages not yet earned, instead of being paid for by cash in hand. The danger of loss, the trouble attending the system, and the want of ready money, caused the dealer, of course, to charge higher; and thus again there was loss to the consumer—there was so much less for the money than if the goods had been paid for when got, or the quality was inferior. A good housewife will endeavour, if possible, to take the money with her when she goes to purchase, and thus she will obtain a better article, or more of it; or if she can be better served elsewhere, she is not tied to any one by being in debt or seeking credit. The passbook system amongst the working classes is not consistent, as we think, with good housekeeping and real domestic economy.

We trace much of this to the want of training, and it will never be removed till such a defect be supplied. The daughters of the working classes are not less apt at learning than others, when they have the opportunity. We know it to be a fact, that where there has been right training in domestic matters, they have shown their aptitude; and even in cases where there was little to aid, and much against them, they have displayed most admirable tact, and given evidence of first-rate ability. There are many in the higher classes who, had their training been equally defective, would have cut a far more ridiculous and sorry figure than their poorer neighbours do. The evil exists, however—there can be no doubt of that—and giving them all credit for managing much better than in their circumstances might be looked for, the want of domestic comfort drives the husband of many such a wife away to the dram-shop or the beer-house—sends him forth to meet with evil companions instead of his being cheered, gladdened, and blessed by the hallowed influence of home. If our temperance work is to prosper, we must attend to and remove these hindrances. If matters go on as they have been, especially in our manufacturing towns, home, in a generation or two, will lose altogether its attraction, and with that, scenes of dissipation will follow that it is appalling to contemplate. One of the greatest aids in our movement, both as to the prevention and cure of intemperance, will be found to be *the cherishing, fostering, and advancing, so far as is possible, the home feeling*, and to that we shall do not a little by the furtherance of proper domestic management.

But what can we do? To such a question we might readily enough reply in the words of the old proverb, "where there's a will there's a way;" but more will be expected of us. All we can do, however, is but to throw out a few hints. In different localities different means must necessarily be adopted. Opportunities will vary, and must be taken advantage of as they occur, and the condition and circumstances of the population must be taken into account. In many cases, it might be possible to give direct instruction to girls in the matters mentioned. Persons have been at work already in that direction, such as Miss Burdett Coutts; but it is not necessary that any one should have such a fortune as that lady possesses, in order to take a part in this object, and to be effective in advancing it. We would urge on our temperance members to *lead the way*, in their various localities. It would not be necessary that the expense of any plans that might be adopted should be borne exclusively by those engaged in our movement. Such an evident means of good-doing will command the support of the public generally, or, at any rate, of the truly benevolent; and temperance reformers, in leading that work, and taking an active part in it, would alike be furthering their own cause, attaining greater personal influence for good, and would show, that while never losing sight of their special work, they were not unwilling to take part in efforts of any proper kind for the good of society, and were even to be found leading the van in every good cause. We must, in every case, be faithful to our principles, but that may be done without standing aloof from any good cause; and these principles may be furthered by our being energetic and ardent in those schemes for good in which we can take part with others. This is one of these. And surely, there are amongst us *matrons*, whose services gratuitously given to the daughters of the working classes, at other than work hours, might be advantageously employed, and who would benefit these not in that only, but by the influence for good which would be obtained over them. And we have *men* amongst us with common sense and habits of observation, and with talents and education sufficient to enable them to give lectures on subjects allied to those on which matrons only could give instruction. And more than all, we have amongst us many of the very class who need to be benefited; and in our Juvenile Associations and Bands of Hope, a good deal might be done to prepare those girls and young women who have, and can have, little home training, for the position they may yet have to occupy in our country's homes.

And means might doubtless be found

for giving information calculated to promote the practical adoption of better housekeeping by those who already have to do the duties of the wife and mother. We know a case in which one of our societies, with the most beneficial effects, offered prizes for the houses best kept, in a defined district, by the wives of working men. Lady visitors were appointed; a list was made up of those who were willing to compete; the ladies visited, and while they gave hints, took care to drop in to see how these were followed out. As they made their rounds they noted the results, and at the end of the season decided accordingly. There was no intrusion. The visitors were cordially welcomed, and the effect was most excellent, not only on the competitors themselves, but on all the families in the district. Others than members of the society gladly gave for the prizes, took part in the inspection, and rejoiced in the results. Some such thing, embracing a wider field, might be done in any locality, and would undoubtedly prove beneficial. Other methods must occur to many, and all methods must be modified by the locality and the circumstances. We only throw out hints which may lead to fuller plans; and conclude by recommending that, in every case, care be taken so to do what is done, that those we seek to benefit may learn *not to depend on others, but to help themselves.*

ADULTERATED DRUGS AND BOTANICAL MEDICINE.

THERE can be no doubt of the fact that our drugs are either all adulterated, or that we have no guarantee that they are genuine; it has been proved, in the most satisfactory manner, by parliamentary inquiry; in fact, the series of misdemeanours connected with the drugging of the people is like the Crimean malpractices, so very complicated, that it is difficult to fix the guilt upon any class of persons; for the chemists say they buy the drugs adulterated from the wholesale dealers, and the wholesale dealers say that they are imported so to them; and the physicians shield their own profession by ascribing their failures to adulterated medicine; whilst, at the same time, it appears that it is customary with chemists, in making up prescriptions, to follow a rule of their own, without being particular to a scruple, a drachm, or a grain, in respect to those illegible pieces of paper that M.D's. give you for the gold pieces you give them. And thus, when the vial and the pill come at last, you know not what you are taking, nor does your doctor know what you have got. You take it in faith, and he hopes for the best.

There is scarcely anything that is not adulterated by something cheaper than itself, unless it is sold in its natural state. If you buy ginger in the hard lump you get it pure; but if you buy powdered ginger you get a mixture of sago, flour, ground rice, turmeric, &c. If you buy cod-liver oil, or pay for it at least, you are not sure that you have got it at all. If you buy olive oil you may get lard oil. You ask for citric acid, and they give you tartaric acid instead. Even a pennyworth of jalap is mixed with guiacum raspings. Of thirty-two samples of opium, examined by Dr. Hassall, only one was found to be genuine. Plasters are a collection of all sorts of waste matters melted together. Quinine is adulterated with from 50 to 60 per cent. of quinidine, a cheap and inferior article. Rhubarb is adulterated with flour and turmeric. Calomel is adulterated with chalk, sulphate of baryta, and white lead. In other words, we are at the mercy of a set of rascals whom it is not easy to detect; so that, even if they were tried, like the Crimean generals they would be sure to get off. No wonder physicians fail, even supposing medical science to be an exact one, which it is very far from being.

The fact is, our medical system has fallen too much into the hands of Paracelsian alchemists and fire-worshippers. Everything passes through the fire now-a-days. There is a rage for chemistry in medicine. It began with alchemy, and Paracelsus was the first who made use of mercury in medicine, and other metals followed; the previous practice was all botanical. It was about the time of the Reformation, when the whole world was undergoing a change, that this chemical era began, and it has been growing ever since, especially in Protestant countries—

England and the United States, the paradises of chemical druggery. But now it seems to have created a reaction by its own excesses and quackeries. It has been assailed on all hands by homœopathy, hydropathy, mesmerism, atmopathy, chronothermalism, and kinesipathy, and a revival of the old system of herbalism, which, until the system of Paracelsus was introduced, was the only system of medicine known to the world.

Now without discussing the merits of either of these systems in comparison with the dominant system, their existence is a sufficient evidence of its tottering condition. They are to it what Protestant sects are to Popery: they may be all heresies, but they prove a want of popular satisfaction with the overpowering system; and one of the chief peculiarities of all and each is an abhorrence of the drugs either in their quantities or their qualities.

It is chiefly to the botanical system that we now direct the attention of the reader, not because we consider it the best, for of that we do not as yet pretend to be able to judge, but merely because we think it deserves consideration along with the rest; first, because its remedies are simple, natural compounds; second, because their adulteration can be more easily detected; and third, because it employs no metallic substance, but supplies its place with substances equally effective, for any metal that the human frame requires is to be found in plants, which constitute the food of man as well as his medicine, and that metal is only a very little iron.

The greatest number of our chemical drugs are taken from the vegetable world; but they generally undergo this new fire process, and instead of natural compounds they become chemical simples, said to be improvements upon nature. Perhaps they are; for nature may be improved, as all cultivation demonstrates; and art is a legitimate province of human industry, whilst they who content themselves with simple nature makes little progress in profitable science. Herbalism, moreover, had a long trial and was superseded at last by chemicals, for some substantial reasons; but then it was chiefly practised in unscientific times, and it has not yet been sufficienty well tested in modern times, or submitted to the criticisms of the press like the chemical system. It requires to be tried again in a court of review or appeal, and we are glad to see it reviving, and demanding a new and a fairer trial.

It still continues to be the popular system in remote and rural districts, where chemistry has not yet penetrated. In all old Romish nations it has not been superseded. Even the French are not yet weaned from it. It is chiefly in the great cities of Protestant lands where it has been almost subdued. But even in London there are still the remains of the old herb-shops in Covent Garden and elsewhere; whilst the botanical medicinists have established shops of their own, where a complete herbarium of Nature's drugs is to be found.—*Family Herald.*

PLANTS OF THE SUBTROPICAL ZONE.

In the island of Madeira, there is a species of houseleek, which attains the form and character of a tree. But some of the most remarkable and peculiar plants of this zone are the large and even tree-like euphorbias *(spurges)*, which, with their angular, succulent stems, seem to imitate the cactuses of America. These plants, which are very various in form, are generally of the most acrid and poisonous nature, though some are possessed of exactly opposite qualities, and are both innoxious and nutritious. The number of species of euphorbia and its allied genera, is said to be two thousand five hundred; by far the greater part of which are tropical, or subtropical, and very few inhabit colder regions. It is believed that fully half of the tropical species belong to America. *Euphorbia balsamifera* is a native of the Canary Islands, the milk of which is so innoxious and sweet, that it is thickened to jelly, and eaten by the inhabitants. The cordon *(euphorbia Canariensis)*, another denizen of the Canaries, whose juice is as acrid as that of many of the other euphorbias, is a very singular plant. Its dark green, prismatic branches, six inches in circumference, completely leafless, and edged with pairs of short prickles, rise all at once from a

common root, bend down in a semicircle to the ground, and then rise again perpendicularly at various distances from the first root, so that the tree resembles an enormous lustre, with a number of branches bearing lights. At the extremity of these thick, fleshy branches, break forth the scarlet flowers, which, at a distance, are like burning coals. In Africa and Asia, the leafless, thorny euphorbias are often planted for fences, and they serve most effectually to keep out intruders, injuring those who attempt to pass, not only by their sharp spines, but by the poisonous juices they instil into the wounds made by them. To this zone belong also many of the fig tribe.

The common fig is the produce of *ficus carica*, and the wholesomeness of the fruit is remarkable, inasmuch as the juice of the tree itself is very acrid. 22,768 cwts. of figs were imported into this country in 1848, chiefly from Turkey and the Levant. The fig seems to have been to the natives of the East in former days, what the banana is to the Indian tribes of South America at this day. With little trouble of cultivation, and whether fresh or dried, it supplied their principal necessities, and its failure was considered by the Jews a most grievous calamity. "Although the fig tree shall not blossom, neither shall fruit be in the vines; the labour of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls; yet I will rejoice in the Lord, I will joy in the God of my salvation," is language expressive of the firm confidence in God which the prophet entertained, amidst the most terrible famine, and the greatest earthly calamities.

In Egypt and Palestine grows the sycamore of Scripture, which is not the same tree as the one known by that name in this country. The latter is a species of maple—the sycamore of Palestine is a species of fig *(ficus sycomorus)*. It is a wide-spreading tree, fifty or sixty feet high, with a trunk often of such thickness that three men cannot embrace it. Probably our Saviour had such a tree before him when he said, "If ye had faith as a grain of mustard seed, ye might say unto this sycamine tree, Be thou plucked up by the root, and be thou planted in the sea; and it should obey you." Luke xvii, 6. Its vigorous branches and beautiful evergreen foliage afford a delightful shade, while its fruit seems to have been an important article of food in Egypt and Palestine, and is still used to a considerable extent. Its importance is noticed in Psalm lxxviii, 47, "He destroyed their vines with hail, and their sycamore trees with frost," evidently implying a heavy calamity. The lower classes in Egypt at this day think themselves well regaled when they have a piece of bread, a couple of sycamore figs, and a jug of water from the Nile. The prophet Amos, we are told by himself, was a "gatherer of sycamore fruit." Amos vii, 14. Its abundance in ancient Palestine is alluded to in 1 Kings x, 27, "And the king (Solomon) made . . . cedars to be as the sycamore trees that are in the vale, for abundance."

The valuable substance, India-rubber, now so extensively employed in the manufactures of this country, is furnished by many species of fig in great abundance. All that is imported from India is the produce of *ficus elastica;* and various Javanese and American species yield it freely. It is obtained by making incisions into the tree, and collecting the sap as it flows; when hardened by exposure to the air it forms caoutchouc, or India-rubber. It has of late years been very extensively and increasingly used in this country, and especially since the discovery of certain liquids which will dissolve it, so that it may be applied in the manner of varnish, from which, when spread lightly over any substance, the dissolving liquid being very volatile, evaporates, and leaves a very thin film of caoutchouc behind. In this manner the waterproof cloths and fabrics are made, which are now so largely used. Some idea may be formed of the rapidly increasing consumption of this article from the fact, that in 1830 the quantity imported into England was 52,000 pounds; in 1833, 180,000 pounds; while in 1847, 659,568 pounds were imported. Some species of fig, as the banyan *(ficus Indica)*, send off shoots from their long horizontal branches, which descend to the earth, and there taking root, become subsidiary trunks, which at length often become as portly

as the parent stem. Milton beautifully describes it—

"The fig tree, not that kind for fruit renowned,
But such as at this day, to Indians known,
In Malabar or Deccan spreads her arms,
Branching so broad and long, that in the ground
The bended twigs take root, and daughters grow
About the mother tree, a pillar'd shade,
High over-arch'd, and echoing walks between:
There oft the Indian herdsman, shunning heat,
Shelters in cool, and tends his pasturing herds
At loopholes cut through thickest shade."

There is a tree of it on the banks of the Nerbudda, in the province of Guzerat, with 350 main stems, occupying an area of 2,000 feet, independently of the branches, which extend much further. The number of smaller stems amounted to more than 3,000, and are continually casting out new branches and hanging roots. It is estimated that 7,000 persons might find ample room beneath its shade—

A sylvan temple, arch'd aloof,
With airy aisles and living colonnades,
Where nations might have worshipp'd God in peace.

Mr. Reinwardt saw in the island of Simao a large wood of *ficus benjamina*, which has sprung from one stem. Milton supposes the leaves of the banyan to have been the fig-leaves with which our first parents clothed themselves after the fall. The tenacity of life in some species of fig is very remarkable. A specimen of *ficus australis* lived, and grew suspended in the air without earth, in one of the hot-houses in the Botanic Garden at Edinburgh, for eight months, without apparently experiencing any inconvenience. The whole tribe of fig trees, indeed, including many more species than those we have briefly noticed, is one of the most marked peculiarities of a tropical scene.

The Canary Islands are celebrated for a very remarkable tree, the dragon's blood *(dracœna draco)*. One of these trees, at the Villa Oratava, in Teneriffe, has been stated to be between seventy and seventy-five feet high, and forty-six and a half feet in circumference at the base; it was a very ancient tree in the year 1402, and is still alive and productive. It yields a deep-red resin, called dragon's blood; but the substance sold in our shops under that name is the produce of some palms, of the genus *calamus*.

In the north of Africa, we find the great Desert of Sahara, which occupies a large portion of the subtropical part of that continent. Of course, on the desert itself we do not expect to discover any trace of vegetation; except that here and there, where a spring arises, a spot of verdure is seen, called an oasis; here palms, acacias, and other prickly plants are found. On the borders of the desert, at the base of the Atlas range, the date palm forms large forests, nourished by the moisture which descends from the mountains, and affords food to the inhabitants, and shelter to crops which could not otherwise grow; for the drought on the borders of the desert is so excessive, that no other trees can resist it, rain hardly ever falls, and the scorching blasts from the south speedily dry up any moisture that may exist. The desert has greatly extended its boundaries within the limits of history; considerable portions of Egypt, which were once covered with a rich vegetation, and studded with populous cities, are now sandy wastes; and cities, temples and palaces are buried beneath the sands, while it bids fair to overwhelm still more and more of that ancient and fertile country. But we must look a little at the vegetation of this part of the world.

The papyrus is one of the most interesting plants of Egypt, having been used by the ancients as a material for writing upon long before the invention of paper. Our word "paper" is, indeed, derived from the name and use of this plant. It is one of the sedge tribe *(cyperaceœ)* inhabiting stagnant pools and lakes, though sometimes found in rapid streams. The stems were the part used by the ancients, and their thin plates of cellular tissue were united by moistening and pressing them together, so as to form a sheet, their substance being of so adhesive a nature as to require no other cement. Sheets of large size were thus formed. Belzoni had one twenty-three feet long by eighteen inches broad. Large quantities were exported to Greece and Rome, where it was the only material used for writings intended to be preserved, until the invention of parchment, B.C. 250. Papyrus, however, still continued to be in demand till the invasion of Egypt by the Saracens, in the seventh century, when parchment was generally substituted for it.

The quantity made by the ancient Egyptians must have been very great, judging by the number of rolls often found in the tombs and mummy-cases. In the museum of Naples, there are nearly one thousand eight hundred MSS. of this description, which have been dug out of a small part of the city of Herculaneum, whence the number that must have existed in the Roman empire at that time may in some degree be imagined. The papyrus is doubtless the plant alluded to in Scripture as the bulrush, of which the ark was made for the infant Moses (Exod. ii, 3), and also the vessels of bulrushes in which men sailed, (Isa. xviii, 2). Pliny notices "ships made of papyrus;" and in another place he says, "of the papyrus itself they construct sailing-vessels."

It is singular that, even at the present day, the leaves of the date palm are used to form a sailing-vessel, which is much employed in crossing the Tigris. They are woven into a kind of basket-work, and are thickly coated with bitumen to render them water-proof. Egypt was once celebrated as the granary of Europe, and was the most fertile country in the world. In Gen. xli, 47, it is said, that during the seven years of plenty, "the earth brought forth by handfuls," that is, probably, each stalk produced as much as the hand could grasp. Such productiveness, or even more, is not unusual at this day. Mr. Jowett pulled, at random, a few plants from a corn-field in Egypt, to ascertain how many stems grew from one grain of wheat. The first had seven stalks, the next three, the third eighteen, the fourth fourteen. Each stalk bore an ear. It often happens that one stalk will bear two ears, while each of these ears will branch out into a number of lesser ones, thus affording a plentiful increase. Egypt is indebted for its fertility to a system of artificial irrigation, established in the times of its ancient prosperity. To the same cause the plain of Lombardy formerly owed its richness, and its inhabitants their opulence, and we may add, their liberty, when the nations of Europe were immersed in ignorance and barbarism.

The cucumber and the gourd have been cultivated in Egypt from the earliest times. "We remember," said the Israelites in the wilderness, "the fish which we did eat in Egypt freely; the cucumbers, and the melons, and the leeks, and the onions, and the garlic," Num. xi, 5; and these cooling vegetables, the water melon particularly, still form the great part of the food of the lower class of the people in Egypt during the summer months. "A traveller in the east, who recollects the intense gratitude which the gift of a slice of melon inspired while journeying over the hot and dry plains, or one who remembers the consciousness of wealth and security which he derived from the possession of a melon, while prepared for a day's journey over the same plains—he will readily comprehend the regret with which the Hebrews in the Arabian desert looked back upon the melons of Egypt." Garlic and onions have been esteemed in Egypt from very early times; and Hasselquist shows, that there is good reason for the superior value there set on them. "Whoever," he says, "has tasted onions in Egypt, will allow that none better are to be had in any part of the universe. Here they are sweet, in other countries they are nauseous and strong; here they are soft, whereas in the northern and other parts they are hard. Hence they cannot in any place be eaten with less prejudice and more satisfaction than in Egypt."

Most of the people of Western Asia are remarkably fond of onions, and the Arabs are passionately so. The garlic of Egypt was formerly much esteemed; Dioscorides says, that garlic anciently grew very plentifully in Egypt; and Herodotus tells us, that in his time there was an inscription on the great pyramid, recording the expense of the onions, radishes, and garlic, which had been consumed by the workmen during the progress of the undertaking. The cucumber of Egypt is far less apt to disagree with the stomach than those grown in England; indeed, when in season, they are eaten by all classes to an extent which would scarcely seem credible in this country. In Syria, the cucumber was cultivated in open fields, far from the habitations of men; and here a hut was erected for the watchman, who guarded the fruit from foxes

and jackals. Bishop Heber saw in India a man in a small shed of bamboo and thatch, thus watching a field of cucumbers.

In Arabia, we find the colocynth, a plant of the melon tribe, inhabiting also the Levant. It is, however, a very active purgative, and is much used at the present day in medicine. A still more active plant is the *Momordica elaterium*, or squirting cucumber, the dried juice of which is one of the most violent purgatives known, a few grains having destroyed life. It is, however, useful in dropsy, but one-eighth of a grain is a sufficient dose. A species of luffa, a South American cucurbitaceous plant, possesses similar qualities. These all inhabit the same latitudes as the cucumber, gourd, etc. Arabia is also the country of gums and balsams, a large number of its plants and trees abounding in such exudations. Gum arabic is obtained in large quantities from *acacia vera* and *a. arabica*. The best and whitest comes from the last-named species. It is gathered in vast quantities from the trees growing in Arabia Petræa, near the foot of Mount Sinai; and is so nutritious, that the Moors who collect it live almost entirely upon it during the whole of the gum harvest, which lasts five weeks, and the subsequent journey of transport. Gum senegal, an inferior kind of gum arabic, is the produce of *acacia senegal*, a tree which inhabits Arabia and the interior of Africa, and sometimes forms large forests.

The balm of Mecca is the produce of a tree growing between Mecca and Medina, *(balsamodendron opobalsamum)*, and the balm of Gilead of another species of the same genus *(balsamodendron Gileadense)*, also a native of Arabia. The balm of Gilead was held in very high estimation in the most ancient times, as a medicine and cosmetic. The Ishmaelites carrying Arabian commodities into Egypt, made it part of their merchandise; and it was among the presents which Jacob sent to Joseph while ruler of Egypt. The value which was set upon it as a healing medicine of extraordinary virtue, may be seen from the mention of it in the Bible. According to Pliny and Justin, it was anciently so abundant in the vale of Jericho, that there were whole parks of balsam trees there; and we know from Scripture that it grew in Gilead, on the Syrian side of the Jordan. Now, however, it has totally disappeared from Palestine, and is only to be found in Arabia, which seems to be its native country. It is procured by incision in the tree, but the quantity collected is very small. The large park in the vale of Jericho only yielded six gallons in the most plentiful year, and it was formerly sold for double its weight in silver. It is still esteemed very precious, and is rarely to be procured genuine, that which is collected being hardly sufficient for the seraglio and great officers. It is said to be exceedingly fragrant.

A DRUNKARD RECLAIMED.

"I WISH the temperance people would get my man, Thomas Drew, to take the pledge," said a gentleman who owned an ironfoundry.

"And so do I," said the foreman of the works in reply. "It would be something in your pocket, and save me a good deal of trouble—to say nothing of the great comfort it would prove to his wife and family."

Now, this Thomas Drew was a mechanic, and a first-rate hand in the department in which he worked. However, like many other clever hands, he was given to tippling. If he liked, he could easily earn his two and three pounds a-week, but as it was, he generally took no more than twenty or twenty-five shillings on Saturday night. Does the reader ask, How was this? Well, it was because he seldom got to work before Wednesday morning. Saturday night, as much of Sunday as the law would allow, and parts of Monday and Tuesday, he was in a public-house, spending his earnings, and thus keeping his wife and children destitute of the necessaries and comforts of life. After such a carousal, even when he did begin to work, he could not do much until the following day. Even on Thursday, Friday, and Saturday, he could not put forth efficiently all his mental and physical energies, because he lacked a proper supply of necessary food. If he had done so, thirty shillings or more would have been forthcoming on pay-night.

On account of Thomas Drew's unsteady ways, the master and foreman of the foundry had frequently talked about discharging him. Matters which wanted attention on Monday morning could not be attended to until Wednesday, and of course this was very annoying to the employer. The master's threats would have been put into execution, if Thomas had not been a superior workman. But as he excelled in a certain department, and as his equal in skill could not be met with, he was retained time after time. Ofttimes did the master give him moral counsel respecting his evil ways, and oftimes did the master request him to attend temperance meetings.

It was on seeing a temperance meeting announced, that the conversation with which we commenced this paper took place. Whether the temperance people made any special effort to get hold of Thomas we cannot say. However, this we can say, that the foreman determined to be unremitting in his endeavours to reclaim the inebriate. And, moreover, we rejoice to say he was successful, as we shall presently see.

The foreman was a truly Christian man, and his labours did not end in talking. He practised as well as exhorted. One Saturday, when he was paying the men their wages, Thomas's turn came as usual. On reckoning with him, he found that it was an unusually bad week for him. "Well, how is this, Thomas," said the foreman, "that you have only fourteen shillings coming to you this week?"

"I did'nt get to work till Thursday, and all the time I have been at it I have felt quite unfit for it," replied Thomas.

"Through your drinking at the beginning of the week," said the foreman.

"Suppose that it is," Thomas added. "All day on Wednesday I was in bed, tormented in body and soul. I shouldn't have come to work at all this week, but couldn't bear to be in bed by myself, and I had no comfort at home."

"Ah, Thomas," said the foreman, "you have long found out that the way of transgressors is hard. How is it you do not cease to do evil, and learn to do well? You just go and sit down by the fire, and when I have settled with them all I shall want to have a little talk with you."

In the course of a few minutes the men were all paid. The foreman then spent a few minutes more in making proper entries in the books; then he closed them for the week, and locked them up. Thomas was now told to come into the countinghouse. When he and the foreman were alone, the latter expressed himself in the following manner:—

"Now, Thomas," he said, "I have a proposition or two to make to you. You are poorly, and want nursing. On account of your evil ways you have but little at home that will prove to your comfort. Your poor wife would, no doubt, do what she could, but she has not the means, for you have destroyed or pawned nearly every comfortable piece of furniture. Now, what I have to propose is, that you let me take or send these fourteen shillings to your wife, and you come along to my house, and be there until Monday morning. My wife and the servant will do their best to nurse you up, and by Monday morning I think they will be able to get you round again. Are you agreeable?"

Thomas was overwhelmed with this kind offer of the foreman. He felt himself too poorly, and he knew that his own home would afford him but few of the comforts that were required to repair his wasted and deranged energies, so he at once complied with the kind offer. Soon after, he and his friend were seen walking towards the residence of the latter.

When the foreman had conducted him to his own home, he went to Thomas's wife and delivered the fourteen shillings, and told her all about it. Although it was a small sum in comparison with what her husband could earn, yet it was very much more than what she had received of his wages for many a month. She was glad enough to receive the money, for she sadly wanted it for her own necessities and the necessities of her children; but she was more pleased still to hear of the foreman's kindness to her husband, and thanked him with tears in her eyes.

Mr. Bonning, for that was the foreman's name, returned home and took tea. Thomas also took tea, and ate a little, and afterwards felt refreshed. Early in the evening a warm bath was prepared for him, and after using it he went to bed.

And what a bed it was! so clean, so comfortable and forming quite a contrast to his own miserable bed-clothes and bed-room. Then there was clean and comfortable wearing linen also found him—linen which Mr. Bonning himself was accustomed to wear. Indeed, everything was superior to anything that Thomas had been used to. Yet, for all this, the foreman's salary was not so very much more than Thomas's would have been had he been diligent in the performance of his duties.

Mr. Bonning and his family attended public worship, and in the evening he induced Thomas to accompany him there, when Mr. Bonning put him in his own pew.

The next morning Drew went to the foundry at the usual time. For the first time he had made his appearance there on Monday for a long, very long period: it was noticed by all as something very unusual. The master complimented the foreman on the success which had attended his benevolent efforts, and hoped that it would prove the beginning of better days; although his confidence in the matter was not very strong, for he knew not the power of God which had been exerted on his servant's mind.

Thomas returned to his own home in the evening. His anticipations respecting it were not very sanguine. He knew it would afford a strong contrast to the home which he had enjoyed since Saturday afternoon. However, he was in a measure pleasingly disappointed. It is true that, so far as the furniture was concerned, it was just as he had expected. But it is likewise true that there was quite a comfortable supply of plain but substantial food; there was enough and to spare. His wife had laid out part of the fourteen shillings to the best advantage in food, and she had done her best in the preparation of it. Thomas was really surprised how far a little money would go if properly expended in making a home comfortable. He had no idea of the matter before. Almost weekly he had squandered a pound in strong drink—a pound which, if it had been properly expended, would have amazingly contributed to his comfort, but which, as he had spent it, made him miserable and lazy, his home comfortless, and his wife and children haggard and wretched.

After he had partaken of the evening meal, he asked his wife whether she had a Bible in the house. "No," she replied, "but I can borrow one." "If I had the money I would buy one," he said, "for they are to be had for tenpence a-piece." "Oh," his wife replied, "I have four or five shillings of the money Mr. Bonning gave me on Saturday night," and she put the money into his hand. Without hesitation Thomas went to the Bible depôt, and bought one. He returned, and when his wife was ready she and some of the elder children sat down, and he read three or four chapters out of one of the Gospels. Afterwards they all knelt down, and the father and husband prayed. Though the sentences of that prayer were broken, and many of them inarticulate, yet it was such that it was acceptable to God.

Again the next morning Thomas was at his work. Again the next Sunday he was found in the sanctuary. Again the next Monday morning he was in his place. And so it continued. Old things passed away; behold all things became new. The fondest hopes of Mr. Bonning were realised. The master was glad of the change, although he knew not whence it came. The other mechanics were compelled to admit that Thomas had become a very different man. After a while he found peace through the blood of the Lamb. He progressed in wisdom's ways. He experienced the advantages of true piety; and, before long, he witnessed the good confession before many witnesses.

Where is Thomas Drew now? He is still at the foundry. He still retains the pre-eminence as a mechanic in his own department, and generally takes his three pounds a week. He now has a residence worthy the name of a home, and equal in comfort to what Mr. Bonning's was, when that gentleman took him to his own house and nursed him The best of it too is, he can call it his own, because with his savings he purchased it. On Sundays he goes up to the house of God with his wife and family. He is a teacher in the Sunday school, and during the time not so employed, he is diligent at home in

training his own children in wisdom's ways. His own works praise him, and he is respected by all who know him.—*The Appeal.*

ANOTHER CASE OF POISONING BY THE BLUNDER OF A CHEMIST'S ASSISTANT.

A SHOCKING case of poisoning by mistake is recorded. The son of Colonel Broughton, of Powell Villa, near Weymouth, being unwell, Mrs. Broughton wrote to Mr. Barling, a chemist, in the following terms: "Please send an aperient draught for a child eleven years of age." Mr. Barling was out of the way, and, as is always the case when he is absent, the shop, with its dispensing duties, was left in charge of three apprentice youths. The letter was presented by Mrs. Broughton's nurse to one of these apprentices, named Lundie, a lad about eighteen. He read it, and said to a boy named Barrett, another apprentice, aged fourteen, "Fill a bottle with black draught." The boy thought the words were "black drops," a poison which is five times as strong as the common laudanum. Barrett filled the phial with this deadly liquid, and handed it to Lundie, who labelled it "the aperient draught," and gave it to the nurse. At nine o'clock that night the poor doomed child took the medicine from his mother's hands, immediately fell into a deathlike torpor, and in less than an hour was a corpse.

CORRESPONDENCE.

To Mr. SCOTT.—Sir,—Having derived so much benefit from the use of Dr. COFFIN'S medicines as prescribed by you, a few weeks ago, when laid up with "erysipelas in the knee-joint," I feel great pleasure in bearing my testimony to their unspeakable value, and shall at all times feel it a pleasure and a duty strongly to recommend them to others.—I am, your obedient servant,

G. HEDGES.

P.S.—The medicated vapour baths I found very beneficial.

15, *Penson's-gardens, Oxford,*
September, 1856.

To Mr. SCOTT.—Dear Sir,—For the good of the public and the furtherance of Dr. COFFIN'S system of medicine, I beg to state the following facts:—

For a long time I have suffered from a skin disease, which at times came upon me, causing great prostration and debility, so as to compel me to send for a doctor, who told me that I must take *mercury to kill the disorder.* Several times I have submitted to this treatment, which always confined me to my bed for a fortnight, and on one occasion for *twelve weeks.* At length, hearing of Dr. COFFIN'S medicines and the cures they had effected, and that you acted as his agent in Oxford, I resolved when next attacked to seek your advice. I applied to you on 27th of last August, and stated my case. You laughed at the idea of taking mercury or any poison to cure disease, and said you were confident you could cure me without any such stuff and in less time. I accordingly put myself under your care, and glad I am that I did so, for you fulfilled your word to the letter. The first bottle of medicine completely turned the disorder, and the *third bottle*, in the short space of a fortnight, completely cured me; and that *without confining me to my bed at all!* Many thanks to Dr. COFFIN for founding such a system, and to you his Agent. I shall know where to apply again when ill.—Yours, &c., HANNAH SHIPPON.

Didcot, Oxon, Oxford,
September 15th, 1856.

To Mr. SCOTT.—Sir,—About two years ago, I had a severe illness, which threatened to end in that fearful malady "consumption." In a few weeks I had entirely lost my appetite, and was so very weak that I could not walk a short distance without fatigue. I grew worse every day, and felt I should soon meet an early grave. At last, I was persuaded to see Dr. COFFIN, and I went to London for the purpose. The medicine I had from you (after the first bottle or two), and in *six weeks*, I am thankful to say, by God's blessing, I was restored to perfect health, which I am still enjoying. Many thanks to Dr. COFFIN, and to you for your kind attention.—Yours,

HARRIET SEARLE.

2, *Beaumont-street, Oxford,*
September 16th, 1856.

CURIOUS INSTINCT OF PLANTS.—Hoare, in his treatise on the vine, gives a striking exemplification of the instinct of plants. A bone was placed in the strong, but dry clay of a vine border. The vine sent out a leading, or tap root, directly through the clay to the bone. In its passage through the clay the main root threw out no fibres; but when it reached the bone it entirely covered it by degrees with the most delicate and minute fibres, like lace, each one sucking at a pore in the bone. On this luscious morsel of a marrowbone would the vine continue to feed as long as any nutriment remained to be extracted.

NOTICES TO CORRESPONDENTS.

We advise "A. C. Foote" to write, or to apply personally to Dr. COFFIN, at 134, High Holborn, stating to him the peculiar symptoms and form of ague with which A. C. F. is afflicted; and the ease would then receive due and efficient attention.—ED.

POST-OFFICE ORDERS and all communications for goods &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S

BOTANICAL JOURNAL

AND

MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE WATERING PLACE DOCTOR.

From a pleasant-reading book, the "Adventures of Arthur O'Leary," we transfer the following well done sketch of one of those fashionable prejudices, which the follies and ignorance of the upper class have brought into being:—

With what consummate tact your "watering place doctor" doles out the infinitesimal doses of his morning's intelligence! how different his visit from the hurried flight of a West End practitioner, who, while he holds his watch in hand, counts the minutes of his stay while he feels your pulse, and whose descent down stairs is watched by a cordon of the household, catching his directions as he goes, and learning his opinion as he springs into his chariot! Your spa doctor has a very different mission: *his* are no heroic remedies, which, taken to-day, are to cure to-morrow; *his* character is tried by no subtile test of immediate success. His patients come for a term, or, to use the proper phrase, for "a course of the waters." Then they are condemned to chalybeates for a quarter of a year, so many glasses per diem. With their health, properly speaking, he has no concern; his function is merely an inspection that the individual drinks his fluid regularly, and takes his mud like a man. The patient is invoiced to him, with a bill of lading from Bell or Brodie; he has full information of the merchandise transmitted, and the mode in which the consignee desires it may be treated; out of this ritual he must not move. The great physician of the West End says, "bathe and drink," and his "chargé d'affaires," at Wiesbaden, takes care to see his orders obeyed. As well might a forçat at Brest or Toulon hope to escape the punishment described in the catalogue of prisoners, as for a patient to run counter to the remedies thus arranged and communicated by post. Occasionally, changes will take place in a sick man's condition *en route*, which alter the applicability of his treatment; but, then, what would you have? Brodie and Chambers are not prophets! divination and augury are not taught in the London and Middlesex Hospitals.

The doctor, then, it will be seen, moves in a very narrow orbit. He must manage to sustain his reputation without the aid of the pharmacopœia, and continue to be imposing without any assistance from the dead languages. Hard conditions! but he yields to them like a man of nerve.

He begins, then, by extolling the virtues of the waters, which, by an analysis of "his own making," and set forth in a little volume published by himself, contain very different properties from those ascribed to them by others. He explains most clearly to his non-chemical listener, how "pure silica found in combination with oxide of iron, at a temperature of 39½ of Fahrenheit," must necessarily produce the most beneficial effects on the knee-joint; and describes, with all the ardour of science, the infinite satisfaction the nerves must experience when invigorated by "free carbonic gas," sporting about in the system. Day by day he indoctrinates the patient into

some strong medical notion, giving him an interest in his own anatomy, and putting him on terms of familiar acquaintance with the formation of his heart, or his stomach. This flatters the sick man, and better still, it occupies his attention. He, himself, thus becomes a "particeps" in the first degree to his own recovery, and the simplicity of treatment, which at first had no attractions for his mind, is now complicated with so many little curious facts, about the "blood," and the "nerves," "mucous membranes," and "muscles," as fully to compensate for any lack of mystery, and is, in truth, just as unintelligible as the most involved inconsistency of any written prescription. Besides this, he has another object which demands his attention. Plain, common-sense people, who know nothing of physic or its mysteries, might fall into the fatal error of supposing that the wells so universally employed by the people of the country for all purposes of washing, bathing and cooking, however impregnated by mineral properties, were, still, by no means so, in proportions of greater power and efficacy, capable of effecting either very decided results, curative or noxious. The doctor must set his heel on this heresy at once; he must be able to shew how a sip too much, or a half glass too many, can produce the gravest consequences; and no summer must pass over without at least one death being attributed to the inconsiderate rashness of some insensate water-drinker. Woe unto him then who drinks without a doctor! you might as well, in an access of intense thirst, rush into the first apothecary's shop, and take a strong pull at one of the vicious little phials that fill the shelves, ignorant whether it might not be aquafortis or prussic acid.

Armed, then, with all the terrors of his favourite spa, rich in a following which is as much partizan as patient, he has an admirable life of it. The severe and trying cases of illness that come under the notice of other physicians, fall not to his share. The very journey to the waters is a trial of strength which guards against this. His disciples are the dyspeptic diners out, in the great worlds of London, Paris, or Vienna; the nervous and irritable natures cloyed with excess of enjoyment, and palled with pleasure; the imaginary sick man, or the self-created patient, who has dosed himself into artificial malady; all, of necessity, belonging to the higher, or, at least, the wealthier classes of mankind, with whom management goes further than medicine, and that is a hundred times better than all the skill of Hippocrates. He had need, then, be a clever man of the world; he may dispense with science, he cannot with "*savoir faire.*" Not only must he be conversant with the broader traits of natural character, but he must be intimately acquainted with the more delicate and subtile workings of the heart, in classes and gradations of mankind; a keen observer and a quick actor. In fact, to get on well, he must possess in a high degree many of those elements, any one of which would ensure success in a dozen other walks in life.

SOLOMON IN THE NURSERY.

CHAPTER I.

"TRAIN up a child in the way it should go, and when he is old he will not depart therefrom." So spake the wise man centuries upon centuries ago; and it will never be possible, should the world last centuries upon centuries to come, for the greatest progress in philosophy to condense more practical instruction into one brief sentence than there is in this; and although our business is mainly with the bodies of our species, it may not be out of our path to say a few words about the training of that better part of man, which has often far more to do with the grosser portion of our being than even in our nineteenth century intelligence we dream of. And this "training up," when should it begin? Just in that important scene which commences the great play of life, the nursery. Little do we imagine the importance of the prologue of existence, and what immense effects it may have upon the living drama, and upon the character of the epilogue we shall have to pronounce when the curtain has fallen, and we recapitulate the results of the performance, and "point the moral" to the tale. Yes, in that choice spot of the household, where the budding actors are preparing their parts, and putting on that mental as well as physical costume wherein

they are to "strut their brief hour" upon the stage of the great world, we little heed the mighty influences that are at work to make or mar the coming man or woman. We are too apt, even the nicest amongst us, to look upon that engaging spot as the safe and sheltered haven where the moral tempests that affect the ocean beyond can do no harm, and we only commence the real business of life when we take the tender pupil outside its walls, and do not heed the notes of mental development and intellectual activity which have tried their strength, and felt their power, even within those quiet and hallowed walls. We look upon the tender infant, upon its tiny struggles in mental and physical combat, with loving interest, and applaud each puny effort, and laugh at every wayward fancy, as if all were just as it should be; and when we breech the youngster, and take him from under his nurse's apron, we begin to feel, for the first time, how difficult is the task that we now know we must begin in real earnest—a task pleasing and delightful ever, but often most tedious and severe; but which need never have had these latter attributes, had we but practically applied the saying of the wise man from the moment the little one first laid on its mother's breast, nestling where its nourishment and its warmth were claimed and gratefully awarded by a tender parent's love.

"But," exclaim a hundred mothers, "what can you do with a baby?" To which we would reply by asking, "What can you *not* do with a baby?" That soft, pliable little thing you know can be moulded in its bodily frame to almost anything. The Chinese mother forbids the feet of her female offspring to grow; and, by bandages and pressure, secures what she deems an indispensable beauty, namely, smallness of feet. Any limb of the body, in that tender period, can be made to grow in almost any shape the caprice or custom of savage or barbarian ignorance may devise; and the mind, the mental organism, with the same pliability can be made to grow to any shape the skill or ignorance of its nurse may direct. And we say, without fear of being proved mistaken, you can train your infant to anything. It never has been, and never can be defined, when is the precise moment that the human mind becomes conscious of existence, or when the human will becomes responsible for exertion; and, with this great fact in moral philosophy before us, it is impossible to lay down the precise moment when the "training up in the way it should go" ought to begin; and therefore, to make sure of beginning at the right time, it is better to begin at the very beginning, than, by deferring it until a later period, to have our work made all the more difficult, and, indeed, hazardous.

Now, more or less, most mothers act upon this principle, though they do not realise its importance, and therefore do not carry it out to the extent they might, and stop short generally when, unconsciously, they may have just laid the foundation for a sound superstructure. For instance, every mother knows, soon after her little one's birth, when it is going to suck, and is generally, if she have any reflection at all, anxious to get her infant into "good habits," by compelling it to have certain things done to it, such as washing and dressing, at certain times. And what mother that has thus practised does not know the evident uneasiness of the child, if these times are overstepped, or its "fractiousness," if anticipated, and its comfort disturbed by untimely meddling. This is teaching; and it is perfectly evident that the baby is an apt scholar, and too obedient, for it finds its comfort advanced by the regularity of the performances it goes through. But when it gets a little older, say a month or two, it begins to cry from passion; and then the mother, believing it "knows no better," fondles it, rocks it, dangles keys, and "pretty, pretty things" before it, gives it the breast at unusual times, and anything, in fact, to "keep it quiet;" now teaching clearly another lesson, but a fearful one for her and its subsequent peace, that to cry and throw itself into a rage is the way to get an extra and unlawful amount of what its animal nature perhaps teaches it to crave for. And so, undoubtedly, when its little mind is not judiciously supplied by a change of position, light, and so forth, it will set to "squalling" to get that indulgence which it *must* reflect was the

consequence on a former occasion of a similar display of temper. Its experience is enlarged, and, be assured, it will apply it most vigorously on every possible occasion; until, at six or eight months old, it is the tyrannical master or mistress of its domain, the nursery, of its nurse, of its mother, or even of its father, and each and all have to walk it about, sing to it, dance it, strike a light for it, light the fire for its food to be warmed, &c., &c., until at last the "young monkey" condescends to be quiet; and, giving a knowing smile, as much as to say, "how nicely I have done you all," which of course produces a corresponding laugh, together with a hug and a kiss, and "dear child" from the worn out parent, and condescends then to go to sleep again, and let the house resume its repose. "But what am I to do?" cries the mother. The first time your infant cries without any evident cause—and no mother can mistake this, with a very little experience of her former children, or those of others—do not humour it, do not caress it: lay it in a comfortable position, the one it is used to go to sleep in, and tell it in the tone of voice you generally adopt when you want it to go to sleep, and then let it be. Its passion may produce a sort of hysterical convulsion, if it is a strong and vigorous child; however, you need not let it go so far, but change its position and distract its attention to check this, but let no sign escape you that you mean to give way to it one inch. It will ultimately go to sleep exhausted; and then, when it awakes refreshed and good-tempered, feed it, if necessary, and caress it to your heart's content. Perseverance in this course for a few times will soon teach the "dear, cunning little fellow" that he gets better treated by being good and obedient, than by the reverse. The writer of these remarks was told by his beloved and respected mother that, at six months old, he threw himself into convulsions which turned him perfectly black and blue, on three occasions when he could not get what he wanted; and although he need not say what alarm his mother felt, yet she never gave way, and completely conquered the young gentleman, who, having nearly suffocated himself with rage without getting what he bellowed for, evidently found it was greatly against his comfort and interest to endanger himself any more. He thankfully ascribes the self-command and ease with which he now in manhood keeps completely in check a quick and rebellious temper, urged by a strong will, to the wise and judicious infantile training he received at the hands of a parent, whose mind was as well fitted for her office as her affection was unbounded towards her offspring. We do not deny that the natural passions are implanted stronger in some organisations than in others; but we do deny that it is impossible to help what nature has ordained. On the contrary, it can everywhere be accomplished—that same correct training which shall subject even the strongest passions to a will still stronger—if only thus early brought to act and to know its power. But our first chapter must close.

WILD FLOWERS OF THE YEAR.

OCTOBER.

"Let me quit this spot,
And roam where Nature sheds a parting smile:
As yet the blue-bells linger on the sod
That copes the sheepfold ring; and in the woods
A second blow of many flowers appears,
Flowers faintly tinged, and breathing no perfume.
But fruits, not blossoms, form the woodland wreath
That circles autumn's brow; the ruddy haws
Now clothe the half-leaved thorn; the bramble bends
Beneath its jetty load; the hazel hangs
With auburn branches, dipping in the stream
That sweeps along, and threatens to o'erflow
The leaf-strewn banks." JAMES GRAHAME.

THE brown October is more fertile in fruits than in flowers, and the wild nosegay gathered now is, indeed, a small one. Yet the pastoral landscape has not lost its charms, for its grass is still bright and fresh. It is not the decrease of flowers alone, however, which warns of autumn. The trees are now yellow, red, or of a withered brown, with his touches. Some, like the ash, and the great white poplar, are daily dropping so many showers of leaves, that we are anticipating that their naked branches will soon stand boldly out on the landscape. The swallows are congregating for their departure to other and warmer lands; and the loud twittering which they make on the great oak, or elm, has, to the naturalist, a sound peculiarly autumnal. All at once we miss

the sound, and they are gone; and we are reminded of the allusion made by the prophet Jeremiah to the migration of birds, and the melancholy comparison which he draws between the wild bird and the instructed man. "Yea," says the prophet, "the stork in the heaven knoweth her appointed times; and the crane and the swallow observe the time of their coming; but my people know not the judgment of the Lord." Alas! it is not alone to ancient Israel that the reproof belongs. The voice of nature, and the voice of Providence, and the voice of God's word, are still unheard by unthinking man!

The cultivated fruits of earth are now chiefly gathered in. The corn is brought into the garner, the fragrant hops are lying in the storehouse, the cherries are gathered and consumed, and the store of apples, destined for winter use, are either taken from the tree, or are ready for harvesting. But the wild berries grace the hedges by thousands, and glimmer among the rain-drops like jet and ruby mingled with crystal. The clear berries of the nightshade are outshone by the beautiful red clusters of the berries of the guelder rose, and contrast with the deep-opaque red fruits of the bryony or the more orange-tinted branches of the mountain ash. The scarlet haws and hips, the blackberries, the rose-tinted fruits of the spindle tree, lying open and displaying the bright orange-coloured seeds, are all plentiful now in the good greenwood; and when we consider the fruits of earth which are laid up for man, and mark the preparation of food for the fowls of heaven, may we not say with the psalmist, "Thou crownest the year with thy goodness!"

It has been observed of our native fruits, that white berries are commonly sweet, red ones sour; blue, of a sour, mixed with a sweet flavour; and black are either almost tasteless, or poisonous. But several of our scarlet berries are poisonous too, and should never be tastsd by any who do not understand their properties.

The ivy *(hedera helix)*, which mantles over the old ruins, or climbs to the highest bough of the oak of the forest, is now displaying its clusters of green blossoms; and the bees which still venture to leave their retreats, when the morning sun shines out brightly, seem highly to prize them. The French term this plant *la lierre*, and the Spaniards give the name of *yedra*, not only to the ivy, but to every plant which, like this, has a propensity to climb.

Sheep are very fond of ivy, and its gray-veined leaves often yield them a winter repast. The Irish ivy *(helix vegeta)*, so often cultivated under the name of the giant ivy, has very large leaves, but in other respects differs little from our wild plant.

The question, whether ivy is destructive to trees, has been much discussed by botanists, but it seems the general opinion that it is not so. Loudon considers that the ivy is the only plant which may be reared against houses without rendering the walls damp; and the sole objection to be raised against the picturesque covert which it affords to the house wall is, that it harbours spiders, and other insects, which will sometimes find their way into the dwelling.

That very handsome shrub, the strawberry tree, or bear-berry *(arbutus unedo)*, is now gay with its greenish-white flowers, which hang among its thick evergreen foliage like so many waxen bells. This shrub is very common in gardens, but it is usually enumerated among our wild plants, for it has been known to grow for many centuries in the south of Ireland; some writers, however, think that it was introduced there from Spain, by the monks of Mucross Abbey; and when we consider how many flowers and shrubs, as well as esculent vegetables, were brought into Britain for the use of the monastery lands, this is not improbable. At the lake of Killarney, so often celebrated by the poets for its beautiful scenery, the arbutus grows in great plenty, and attains a considerable size, in the woods on the shores of the blue waters. The fruit of the tree is as large as the common hautboy, but of a much deeper crimson, and of a firmer substance; it is very ornamental to the tree, and it appears to have been a common article of food among the ancients, as it now is in Spain and Italy; yet Pliny says, the specific name of the plant is derived from *unedo*, I "eat one,"

because he who ate one would eat no more. Its name of arbutus is also from the Celtic words, *ar boise*, "austere bush," because of the nature of its berries; yet to many persons their flavour is agreeable. The Spaniards make of them a conserve, and the Irish peasant children gather them for sale, from the bushes of Killarney.

Two other kinds of arbutus belong to our wild plants: the trailing or black bear-berry *(arbutus alpina)*, which grows on the bleak highland mountains, and whose foliage in autumn is remarkably beautiful, from its deep yet bright crimson colour; and the red bear-berry *(arbutus uva ursi)*, which is a common plant throughout the north of England, and on the Scottish Highlands. Its blossoms are of a deep rose colour; its berries smaller and more austere than those of the strawberry tree; and they afford excellent food for the moor-fowl.

The shepherd's spikenard *(conyza squarrosa)* is among our latest-blooming wild flowers. It has hairy leaves, and as its stem is often a yard high, it is not likely to be overlooked on the chalky or clayey pastures, where it abounds. Its radiate or star-shaped flowers are yellow, and grow in clusters. It was, in former days, hung up in rooms to drive away gnats, and other insects; and branches of it are still suspended from the cottage ceiling in the French village, for the same purpose. The spikenard is often cultivated in gardens; and the strong odour of camphor, which some exotic species emit, may probably have suggested its name, as many writers consider that camphor is the spikenard of the ancient writers, and the substance alluded to, under that name, in the Song of Solomon.

And now, when few flowers appear, we are glad to gather the second bloom of the purple violet from under its broad canopy of leaves, and to detect something like the spring odour in its flowers. That pretty bright yellow flower, with its pea-shaped blossoms, the hairy dwarf green weed *(genista pilosa)*, very generally blooms, for the second time, on the gravelly or sandy heath, during the latest months of the year. Several kinds of crocus, too, appear late in the autumn; and one species, the naked-flowering crocus *(crocus nudiflorus)*, does not open its bright purple flowers until October, when it may be found in the meadows of some counties. How far any of the crocus tribe may be considered as truly indigenous, is a point on which botanists differ. Some writers think that they are all natives of Asia, and have been naturalised in those spots where we find them growing wild. Dr. Hooker enumerates five species in his "British Flora."

The largest of those pretty white flowers, the winter-green, or pyrola, may still be gathered from beneath the shade of the autumnal wood; for though these plants begin to bloom as early as July, they are quite vigorous till now. The species which blooms the latest is the round-leaved winter-green *(pyrola rotundifolia)*. It cannot be said of one of the winter-greens that it is a common flower of England, though it is less rare in the north and in Scotland. The round-leaved species has white spreading flowers, and grows on moist copses. It is often found in Yorkshire, and, occasionally, in the Kentish woods. All the plants are exceedingly pretty, and are called winter-green from their unfading foliage. They all possess tonic properties.

And now, when flowers are few, the mosses attract the attention of the botanist, and are flourishing particularly on moist places. These minute plants are found in damp climates, in all parts of the globe, but are far more numerous in cold and temperate than in hot regions. They are of little value in medicine, or manufactures, nor can we use them for domestic purposes. One species, the fir club-moss *(lycopodium selago)*, is used in the Isle of Sky instead of alum to fix the colour in dying.

Another species, the common club-moss *(lycopodium clavatum)*, which is a large moss frequent in England, and which covers immense tracts of moss land in Lapland, is used in the manufacture of fireworks. It often grows two or three feet in length, on heathy, mountainous lands, and its seeds are remarkably inflammable. It is probable that this moss will be found of more service in dying than has hitherto been supposed; for it has been stated by a French botanist to have the property of imparting a

brilliant blue to woollen cloths, if, afterwards, they are passed through an infusion of Brazil wood.

But though no single moss is of any very great value to man, yet the mosses in general are by no means useless plants. It would reflect no dishonour on their great Creator, could we discern no service which they render to us, and no particular purpose which they answer in the economy of nature. Enough it might be to claim our grateful admiration, that their soft green substance adds to the smoothness of the grassy path; that their scaly stems, or their small leaves, forming little stars of verdure, beautify the landscape. Enough it would be that they enliven the gray stem of the old oak tree, and furnish us with a cushioned seat at its foot. But mosses perform an important part in the vegetable kingdom. But for them, the mountainous regions would be barren indeed; for their patches of verdure cover up the seeds and roots of the alpine flowers, and, as they decay, improve the poor soils of rocks and hills. The trees are defended by them from the winter cold. The whole texture of mosses consists of cells, in which the summer shower or the morning or evening dew lingers, and renders the plant always moist; and thus the little moss preserves from drought the giant tree of the wood. Thousands of insects live on these plants, and hide beneath its shelter; and the bird, whose song gladdens the summer wood, gathers the moss for his nest. The bog and morass are gradually filled up, and in some instances become firm land by the growth and decomposition of mosses. They and the lichens are the first vegetation which spring up on the thin soil of rocks or islands, from which the sea has withdrawn; and the farthest and dreariest spot of earth which the foot of man has traversed was found decked with some of the moss plants. When mosses have ceased, vegetation is at an end, and the snows dwell perpetually on the high mountains, or northernmost point of land. About eight hundred kinds of moss have been discovered, and small as they are, each species has distinct characters, by which all the plants composing it may be recognised. No confusion exists in nature, and when the marks of one moss are clearly defined, the botanist may discover them in every plant of the species, whether he find it on a rock of England, or on some hill distant from our country by thousands of miles. We must look at them through a microscope, to see their full beauty. Unlike the works of man, the works of God are always perfect, and most admirable when most examined. The finest cambrics, when seen through a magnifying power, will be discovered to have specks, and flaws, and uneven threads; but the smallest moss will be found full of symmetry and beauty.

There is something inexplicable in the growth of mosses and lichens on newly formed soils. We can comprehend how the seeds of plants may have reached the summit of the highest ruin, but how can we account for them on new islands, where little specks of moss are seen struggling into existence, on barren and lifeless soils. Their seeds were never planted there by man; the waters cannot have borne thither these minute particles, for so much moisture would have destroyed the vital power of the seeds; the birds of the air can hardly have carried them so far; one would think they had lain in the earth since the creation, and were now bursting into light from their long night of darkness: it is mystery all! But He who made the earth, and the dews which water it, has planted them there, and daily vivifies them with his fresh airs and the showers of heaven.

HERODISM BY AN ALLOPATH.

To Dr. Coffin.—Dear Sir,—I have received the inclosed note from a friend, wishing me to forward it to you, hoping that you will give it a place in the next Journal. He is living seven miles distant from me—was obliged to call in the doctor. The writer of the note is the father of the child. By giving it a place in the next Journal, you will oblige

I. Revell.

Bradford, September 22nd, 1856.

To Mr. Isaac Revell.—Sir,—I think the following case should be placed in the *Botanical Journal*. A. James Stansfield, of Ovenden, near Halifax, had a child

taken ill with the measles, of which it got better, but it was seized with the whooping-cough. The parents applied to a medical doctor, and he gave them five powders for the child. When it had taken three of the powders, its teeth all fell out, and the flesh was eaten off the face, so that the food, when put into the mouth, came out of the cheek. The parents applied to two others of the medical profession, and stated the case to them, but they only pooh-poohed it away. The child is dead, and they made the face up with clay, &c., to give it a human appearance. The child was only a fortnight under the doctor's hands. It died on Monday, the 15th instant, and was buried on Thursday, the 18th. What a stir there would have been had some Medical Botanist attended, and given the child something that would have restored it! Leaving it to others better able to comment, I am, yours, &c.,

E. E.

TWELVE WAYS OF COMMITTING AND CAUSING SUICIDE AND INFANTICIDE.

1. Wearing thin shoes and cotton stockings on damp nights and in cool, rainy weather. Wearing insufficient clothing, and especially upon the limbs and extremities.

2. Leading a life of enfeebling, stupid laziness, and keeping the mind in an unnatural state of excitement by reading romances. Going to theatres, parties, and balls in all sorts of weather, in the thinnest possible dress. Dancing till in a complete perspiration, and then going home without sufficient overgarments through the cold, damp air.

3. Sleeping on feather beds in seven-by-nine bedrooms, without ventilation at the top of the windows, and especially with two or more persons in the same small, unventilated bedroom.

4. Surfeiting on hot and very stimulating dinners. Eating in a hurry, without half masticating your food; and eating heartily before going to bed every night, when the mind and body are exhausted by the toils of the day and excitement of the evening.

5. Beginning in childhood on tea and coffee, and going from one step to another, through chewing and smoking tobacco, and drinking intoxicating liquors, by personal abuse, and physical and mental excesses of every description.

6. Marrying in haste, and getting an uncongenial companion, and living the remainder of life in mental dissatisfaction. Cultivating jealousies and domestic broils, and being always in a mental ferment.

7. Keeping children quiet by giving paregoric and cordials—by teaching them to suck candy, and by supplying them with raisins, nuts, and rich cake, is infanticide. When they are sick, by giving them mercury, tartar emetic, and arsenic, under the mistaken notion that they are medicines, and not irritant poisons, is another way of committing the same crime.

8. Allowing the love of gain to absorb our minds, so as to leave no time to attend to our health. Following an unhealthy occupation because money can be made by it.

9. Tempting the appetite with bitters and niceties, when the stomach says No; and by forcing food when nature does not demand, and even rejects it. Gormandising between meals.

10. Contriving to keep in a continual worry about something or nothing. Giving way to fits of anger.

11. Being irregular in all our habits of sleeping and eating; going to bed at midnight and getting up at noon. Eating too much, too many kinds of food, and that which is too highly seasoned.

12. Neglecting to take proper care of ourselves, and not applying early for medical advice when disease first appears. Taking celebrated quack medicines to a degree of making a drug-shop of the body.—*American Medical Journal.*

PARTIAL PROHIBITION OF THE LIQUOR TRADE INEFFECTUAL.

The law has interfered with the traffic; and, in a variety of ways, sets bounds to its activity, because it is evil. Like a dangerous ox, it must not be trusted at large, and nowhere without its legal muzzle and its sworn keepers. In all these respects it shows itself to be a trade without a parallel. Has the object of interference, then, been accomplished? Have the bitter waters been made sweet? Has it ceased to people the poor-house

with paupers, to fill our streets with disorder, and disgrace our towns with riot? Has it lost its power of polluting women and depraving men; of feeding the hospital and crowding the gaol? In what material respect has the licence system answered its avowed purposes? If it has done so, why these parliamentary committees and reports, session after session, and year after year? If it has not answered its end, why object to the introduction of another legal system that will?

The *Times* tells us to rely on "many agencies in operation which were denied to former ages. We have more schools, more churches, more education, and a greater diffusion of religious feeling. Cannot we avail ourselves of these means of moral suasion." Now, we cannot, for the life of us, understand why the *Times* dosen't teach the government, for the same reason, to annul all law, and disband all police, and avail itself of moral suasion?—if it credits its own leaders. We are accustomed to believe that we require both law and logic; both the policeman and the preceptor; and that we have little enough when done. Is it not so? Yet why should we leave "the countless evils of intemperance, and so productive a source of crime," to the hope of being diminished 50 or 100 years hence, if we can extinguish them to-day by "the absolutism of a Maine Law?" Is it not in that way that we actually do try and get rid of crime? Did the *Times* not advocate the shutting up of betting-houses? The question, however, is one of right, and not of time, nor of education. Education, and the other agencies, have their own positive work to do, and should not be expended in mere negative, and as facts prove, inadequate counteraction. Our question, therefore, returns—Is the licence system effectual? and if not, shall we not try a system that is?—Moreover, the panaceas of the *Times* have all been tried long ago, and all have failed. In Sweden, in America, in Germany, we have had more education, more recreation, more religious training, than we are likely to have (without a Maine Law) for the next century in Britain; and yet crime springing from drinking, and disease, and pauperism, all came up in due course; nay, grew intolerable. And why? The *Times* sees only half the truth, when it talks of education and religion counteracting intemperance—it fails to see the reverse of the medal—that intemperance counteracts education and religion, and has the best of the battle. Well says Canon Stowell:—"It is not enough to say, 'educate, christianize, moralize the people, and then they will not drink.' Give them Sunday recreation, and a variety of sources of pleasure; give them parks, mechanics' institutions, lyceums, and athenæums; these are the counteractions to drunkenness." I ask, have they proved so? Have they much abated drunkenness? Have we reason to expect that they will? Where we have one mechanics' institute, church, or chapel, we have some thirty beer-houses, alehouses, or dramshops. And, after all, knowing what man is—knowing the corruption of our nature—knowing how difficult it is to withstand temptation—what right have we to expect that moral machinery will counteract all these fatal incentives to intoxication?—*Dr. Lees' Alliance Prize Essay.*

SUBSTANCE OF A DIALOGUE

BETWEEN A MEDICAL BOTANIST,
AGENT FOR DR. COFFIN,
AND AN ALLOPATHIC DOCTOR.

Allopath or M.D.—So, Mr. —, you are the person who professes to cure every one with herbs, eh?

M.B.—Not that I am aware of, sir. I never said so, because "there is an appointed time to man upon earth," and I believe, if herbs could do what you say, such are men's prejudices that many would rather die than take them.

M.D.—Oh! but I am sure you have said in your papers, "Medical Botany can cure every one."

M.B.—You must be dreaming, I am sure, sir. What I have given to the public is this: that HERBS (as applied under Dr. COFFIN's system) can accomplish what *minerals* cannot. To that I adhere; and I believe I have stated that minerals can accomplish what Dr. COFFIN's system never has accomplished, I mean *afflict for life*, and sometimes kill, instead of curing, and by this I abide, having proof.

M.D.—Pshaw! (indignantly laughing).

M.B.—You laugh, sir, and no doubt you find it easier to laugh at what I say, than to answer it.

M.D.—Well, but, my dear sir, what absurdity to talk such stuff! Do you think it possible for a simple herb, which any one may gather and stew for himself, can be equal to a medicine prepared at much cost and labour, the result of deep research and study? Do you think we should not be glad to use them if it were so? It's all nonsense. *Herbs* were used formerly, but were found to be of little value; therefore their use has been abandoned for better medicines. Besides, Are all the labour and skill necessary in medicine to be set at naught by a lot of ignorant people, who know nothing about medicine? Trash and nonsense!! (warmly).

M.B.—Nay, sir, not so fast; you grow excited; there's no occasion for that. Let us calmly reason the matter from *facts* and *results*. But first let me remark, that you seem to *scorn* Medical Botany because of its simplicity. Why, sir, that is the very reason why I *love* it; because *all truth*, affecting the wellbeing of man, *is simple*, and the most simple things have ever accomplished the greatest results. Everything necessary for man's happiness is easily come-at-able. Medicine is necessary, and God gave to man the herb of the field for food and medicine; but if minerals are proper medicines, the Almighty left man for five thousand years in ignorance of a great truth. Secondly, I should like to know who are the "ignorant people" of whom you speak, who "know nothing of medicine."

M.D—Why, you professed Medical Botanists, who have been brought up to trades, what can you know of these matters? None but a very few ignorant people would ever dream of going to you, while there is so much professional skill close at hand.

M.B.—Oh, indeed! If by medicine you mean mineral compounds and chemical drugs, you mistake, for it so happens that we know a little too much on this matter; we know them to be injurious and poisonous, and that Dr. Frank was right, when he said, "thousands are slaughtered in their quiet sick-rooms," and Dr. Ring, when he said, "more die through medicine than for want of it;" hence we are Medical Botanists, and all who possess a truth, are bound to spread it, so we teach the people, not in "ignorance" to swallow such destructive agents, when they can be cured by *better medicines*, "close at hand." If by medicine you mean *herbs*, then the charge of ignorance must attach itself to the profession, who are ignorant of the virtues of half the native herbs of our own country.

M.D.—I referred to the science of curing disease. You have not studied, or had the facilities for acquiring a knowledge of anatomy, pharmacy, phlebotomy and chemistry and nosology, necessary to the art, and which has cost us much time and labour: and for COFFIN to employ such persons is criminal. There is no estimating the harm you are daily doing.

M.B.—I quite agree with your last remark, for, were it possible to estimate it, depend upon it, some of the numerous estimates sent in to coroners' inquests by the doctors, would have been accepted, but, after all the trials, not one has succeeded in proving injury through these medicines! But, sir, as you dwell upon the imaginary, allow me to bring you to the *real*. Though none of your school has succeeded in proving the *harm*, I can easily prove the *good* we are doing. Of course you will admit that physic is a *practical* thing; the *end* is to *cure*, and the course of study you undergo, which you consider fits you for your profession, all has reference to this end. A cure, I guess, is what people want of physic and physicians, and all they want; and whether they go to you or come to me, if we fail to accomplish it, it's of no use talking about anatomy, pharmacy, phlebotomy, or any other "tomy;" they will seek other aid; and I guess, that had allopathy fulfilled its mission, homœopathy and hydropathy and Medical Botany and other "pathies" would never have been born, all of which are spreading, partly on their own merits, and partly from the want of success of allopathy. But to return: I said, the end of medicine is to *cure*, and I suppose you will further admit that, if you failed to cure your patients, all your anatomy and pharmacy

and phlebotomy and nosology and chemistry would be useless, and you yourself unworthy the name of doctor; for, if the end of physic is to *cure*, he who can most satisfactorily accomplish that, must be the best doctor or physician. You cannot get away from this conclusion.

M.D.—No, that's all right enough.

M.B.—I thank you, sir, for your admission, and I bring you once more to my facts; and as the end of all your study is to cure disease, I will engage to show the result of my labours on any given number of patients, against the same number treated by any allopathic doctor, if he treat them on allopathic principles; and more, I will engage to take any case of fever, cholera, hooping-cough, or any curable disease, and cure it easier and quicker than any practitioner of the old school, without any *mineral*, or *injurious* medicine, but such only as I could take dose for dose with my patient without any injury to myself, and if I thus prove your pharmacy and chemistry and anatomy and phlebotomy and nosology are useless in the cure of disease, I cannot help it: facts are stubborn things; Dr. —— said, years ago, "the best anatomists seldom make the best doctors." While I prove this, I prove also that Medical Botanists are not so ignorant of medicine as you suppose, and I prove also, these ignorant patients of ours are, after all, wiser than you supposed in rejecting "*professional skill*" for "practical." For, sir, a cure is just as acceptable without the title M.D., or M.R.C.S., as with it, and perhaps more so, if titles are supported by fees. But I think there is another thing I can prove also: you have spoken of the imaginary, the evils we are doing by our medicines, which you have failed to prove; but of course you will not deny the dangerous nature of your medicines. Is it not a fact, sir, that certain substances, comparatively harmless alone, when mixed in the stomach form deadly poison?

M.D.—Yes, that is quite possible.

M.B.—Would not blue pill and nitric acid form nitrate of silver, and have not such been ignorantly prescribed together, and death been the result?

M.D.—Such a case has never occurred in my practice.

M.B.—Has not oxalic acid been mistaken for salts, and many been poisoned through the mistake? Would not one fourth part of a grain overdose of some of your drugs cause death to your patient? Does not mercury, when it falls upon the mouth, at times produce severe inflammation and mortification; and have you, sir, never been alarmed at the effects of medicines you have given, being quite contrary to that which you intended? Now these are matter-of-fact things which I state, but I will challenge you or any other person to deny; also, I will challenge you to show such from the use of herbs. There are no dangerous chemical compounds formed by mixing any two, or twenty of our medicines—no uncertainty in their action—no guesswork—no risk or danger; hence the superiority of Medical Botany.

M.D.—Well, I see you will have your own way, I cannot convince you; but it won't be long before we stop these quackeries by law, or what will become of our rights?

M.B.—Depend upon it, sir, Acts of Parliament will never put down a public boon; you and I, after all, stand upon equal footing—the sufferance of the people. I am a medical practitioner, because the people make me such; and you are only such at the will of the people. If Medical Botany is humbug, and we impostors, we shall both fall together; and if *you* pass a law to compel people to swallow calomel, and they will not come to you for it, both you and your system will fall together. Where people can get best served, depend upon it they will go without compulsion. We must have free trade in physic, and no monopoly. If *rights* of which you speak are obliged to be protected by Acts of Parliament, and a system is compelled to stand upon "*law legs*," it is a proof that it has no intrinsic worth or merits, and the sooner it falls the better; and fall it must; for, as men get awake, they will judge of every system by its own merits, and that which will not stand investigation will crumble to the dust.

M.D.—Good morning, sir, and thank you for your lecture on Medical Botany.

M.B.—Good morning. It may do you good service some day.

[This dialogue has been sent by a cor-

respondent, with an order for one hundred copies of the Journal. We should be glad if other friends of Medical Botany would follow this good example; it would greatly assist to diffuse the principles and to increase the circulation of this Journal. —Ed.]

VARIETIES.

He that hopes to look back hereafter with satisfaction upon past years, must learn to know the present value of single minutes, and endeavour to let no particle of time fall useless to the ground.

Advantages of Silk Apparel.—Electricity has a great deal to do with our health. Yet we know little about its actual office in the economy of our system. In wet or damp weather, almost every one feels depressed and listless, the weak or invalid especially; and this has been accounted for by the loss of that electric influence which damp or moist air conducts away from us. Dry air, whether warm, cold, or frosty, makes us feel light and vigorous, because dry air is a bad conductor of the electric fluid, and therefore does not rob us of it. Now, of all artificial nonconductors, silk is, perhaps, one of the best, for not even the forked lightning can pierce it, provided it be quite dry. It follows, therefore, that wearing much silk—waistcoats, overshirts, stockings, linings of coats, &c.—will greatly help to preserve, in our moist climate, that amount of electric influence necessary to keep the nervous system in vigorous action, as the subtile fluid cannot so readily escape by coming in contact with that moist air which so speedily draws it off.

The Swedish Safety Lucifer Match.—This match is the invention of Lundstrom, a Swede, who has a large match manufactory at Jonkoping, in Sweden, where eight or more millions of matches are produced daily. They are about to be introduced into this country by the firm of Bryant and May, London, who have taken out a patent for their sale in England. The peculiarity of this match consists in the division of the combustible ingredients of the lucifer between the match and the friction paper. In the ordinary lucifer, the phosphorus, sulphur, and chlorate of potash or nitre, are all together on the match, which ignites when rubbed against any rough surface. In the Swedish matches these materials are so divided that the phosphorus (which is employed solely in the amorphous state) is placed on the sandpaper, whilst the sulphur, and a minimum amount of chlorate or nitrate of potash, is placed on the match. In virtue of this arrangement, it is only when the phosphorised sandpaper and the sulphurised match come in contact with each other that the ignition occurs. Neither match nor sandpaper, singly, takes fire by moderate friction against a rough surface. The matches are thus much less liable to cause accident by casual ignition than the ordinary ones.—*Journal of the Society of Arts.*

The Flea Market.—One would think it were easy enough to procure troops of fleas, and to train them to perform; but it appears that neither is an easy matter. It is not easy to procure a lot of able-bodied fleas, and it is not every sort of flea that will do. They must be human fleas; dog fleas, cat fleas and bird fleas are of no use—they are not lively enough, nor strong enough, and soon break down in their training. Human fleas, therefore, must be obtained; and our friend has created a market for them. The dealers are principally elderly females, who supply the raw material; the trade price of fleas, moreover (like the trade price of everything else), varies; but the average price is threepence a dozen. In the winter time, it is sixpence; and, on one occasion, the trainer was obliged to give the large sum of sixpence for one single flea. He had arranged to give a performance—the time arrived—he unpacked the fleas—one whose presence could not be dispensed with was gone. What was to be done? the vacancy must be filled. At last an ostler, pitying the manager's distress, supplied the needful animal; but he required sixpence for it, which he got. Fleas are not always brought to market in phial bottles. A flea proprietor told us that he got all the best fleas from Russia, and that they came over in pillboxes, packed in the finest cotton wool. These fleas were big, powerful, and good workers. When our friend in Marylebone makes his annual tour to the provinces, his wife sends him weekly a supply of fleas in the corner of an envelope, packed in tissue paper. She is careful not to put them in the corner where the stamp goes, as the postoffice clerk would, with his stamp-marker, at one blow smash the whole of the stock.—*Dickens's Household Words.*

NOTICE.

Dr. Coffin's "Treatise on the Diseases of the Generative Organs," is now in the press, and will appear in a few days. Price 2*s.* 6*d.* Post-free 2*s.* 8*d.*

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NOTICES TO CORRESPONDENTS.

C. D., Epsom —Dr. Coffin received the letter, returned through the Dead Letter Office, in which he stated that all ills that flesh was heir to, he prescribes for.

All letters should be addressed "To the Editor of the Botanical Journal," 134, High Holborn.

Post-office Orders and all communications for goods &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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PRECOCIOUS CHILDREN.

Few parents are sufficiently careful in training their children. Young parents who have much leisure and little experience devote their time and their minds to the mental development of their darling little one. In some respects their conduct is praiseworthy, as it appears in contrast with others, who ought always to wear ostrich feathers, since they acquire distinction for the neglect of their offspring. Extremes should be avoided in the training of children as well as in other departments and duties of life. Many matured men and women are now suffering from the treatment they received in the tender years of childhood; some from the neglect with which they were treated, and others from the excess of care and attention they received. Strong parental affection has induced restless and anxious care; but that care has not been directed by sound judgment; hence, labour and expense have been bestowed in the very direction in which they should have been withheld, and withheld in the direction in which they should have been most vigorously applied.

The parent is right in thinking that the education of his child is a subject of the first importance. We agree with this opinion; but we, perhaps, entertain different views on the subject of the education of children to those entertained by many parents in this country. We sympathise with our German neighbours upon very few subjects; but on the subject of education we so much coincide with them that we heartily wish the whole system was introduced into this country, and carried out in every family. The first part of the education of a child should be the development of its physical energies. Wholesome food, cleanliness, well ventilated nursery, regular exercise, appropriate times for rest, change of air, and a cheerful attendant are among some of the most important requisites for the physical education of children. A judicious use of these appliances will aid the vigour and strength of the child's whole constitution, and especially the cerebral organs and the nervous system; and thus a good basis will be acquired, on which the mental process of education may be gently commenced. Where the very opposite course has been adopted, we have seen little prodigies whom parents have admired for their acquisitions, but whom we have heartily pitied, as victims to a misguided anxiety. The brain has been taxed too early, and then overworked by continued application, however allured by ingenious and kind devices, to make "learning pleasant;" and the result has been, a gratification to the parent's vanity in the loud praises of ignorant friends, who, with all sincerity, admired the precocious child. We know of a family where a most accomplished lady is engaged as nursery governess, and though the eldest child is only five years of age, yet French and music, *bonâ fide* teaching of the piano, are going on in that nursery every day, except when interrupted by the injunction of the medical attendant, who has rather a "good thing" in his attendance at that house. The parents of these children feel a pride in introducing Mary Jane, their eldest child, to repeat

poetry and spoil French whenever they have a dinner-party. The two children, whose united ages amount to eight years, are pale, puny-looking creatures. They have seldom an opportunity of going beyond the boundaries of the nursery except on Sundays, when Miss Prim takes them to church in the morning, and spends the remainder of the day in hearing them read. The eldest child of this family was a sweet little girl of highly nervous temperament, with light hair and fair complexion, and fond and loving to all who showed her any kind attention. She had acquired a tolerable acquaintance with the French language, could play several duets on the piano with her governess, and could sing many English and one or two Italian songs. She was esteemed by all who knew her as a precocious child; but she had only reached her seventh birth-day when fatal symptoms of declining health appeared. She lingered but a few weeks, and died. While the parents were mourning their loss, they were frequently told, and they appeared to agree with the opinion, "that children so forward seldom live long." This flattering unction diverted the attention of the parents from the injudicious treatment which they had adopted, by which the health of their child was undermined. In other cases where there has been sufficient amount of *stamina* in the child's constitution to outlive this injudicious treatment, there have been frequently found a degree of mental feebleness to be deplored, a disrelish for intellectual pursuits, and a host of bodily ailments which defy the power of medicine to remove.

If the early years of childhood be devoted to physical development, without any compulsory mental exertion, a vigorous mind in a robust body will generally be the result. In ordinary cases we should say that the age of five years is quite early enough to commence the usual routine of instruction. A process of self-education doubtlessly begins before this time; but so long as it is self-originated, and only watched and sustained by the mental aliment it requires, it will not be injurious to health. Many precious children who might have been spared, have been hurried to an early grave by the very indiscreet efforts of parents to push them on in learning; and by making too great a demand on their little energies, cerebral disease and other functional derangements have been induced. Medical aid has been sought, and medicines of a damaging influence have been administered; weakness has followed disease, and death has come to their relief.

THE DANGER OF POISON-SELLERS.

The number of suicides and deaths occasioned by the blunders of druggists and their assistants, has been so numerous of late as to call forth the following spirited leader in a popular daily journal. This article is so much in harmony with one which we were about to set up in type, that we can willingly transfer it to our pages.

The frequent and increasingly numerous attempts at self-destruction, but too often with fatal results, recorded in our police reports, and to which the facilities for obtaining poisons are directly instrumental, fully justify us in directing attention to the subject as one which demands the attention of the Legislature. Within the last few days several cases have been brought under the notice of the magistrates, of wretched creatures rescued with difficulty from a painful death, the chief feature of which has been that, when under the dark influence of misery and despair, they sought and found a ready means of relief in the purchase of laudanum or oxalic acid at the nearest druggist's or oil shop, no explanation being needed nor any questions asked. In a melancholy case of this class at the Thames office, on Monday, Mr. Yardley "expressed his regret that deadly poisons were sold without inquiry as to the purposes for which they were to be applied, and without any precautions whatever." In another case on Tuesday, in which a married woman had committed suicide, the coroner who held the inquest remarked, "that unfortunately, until the legislature altered the law for the sale of poisons, they would have repetitions of such cases, as he had no power to prevent such sales." This is true enough; and it is precisely for that reason that the interference of the legislature is

called for. It is imperatively necessary, if the feelings of the public are not to be constantly harrowed by such recitals, and many miserable beings saved from the guilt of suicide, that the sale of poisons should be prohibited, except under conditions which would, to a very great extent, guarantee their legitimate use. This is already done in Prussia and other countries, and may be done here, when the legislature deigns to think the safety of human life worthy a little of the time that is bestowed on the protection of property.

Could the shades of Cæsar Borgia and the Marchioness of Brinvilliers be permitted for a space to breathe this upper air, we can imagine the regret of those eminent toxicologists that their lot was not cast in an age so favourable to the pursuit and development of their peculiar line of study as the present. Tofania, too, that illustrious dispenser of "quietness," would find herself tolerably at home in a country where deadly poisons may in most cases be had for the asking. If trading in poisons has robbed the science of some of its romance, it has invested it with a horrible simplicity, and removed much of the danger from the ingenious professor himself, who has no longer any occasion to compound his own "aqua Tofana" or "powder of succession" under the protection of a glass mask, or at the hazard of his own valuable existence. These things are managed differently now in England. Does a gentleman wish to get rid of a sickly or termagant wife, or a lady desire to be free from the companionship of a tyrannical husband—they have only to walk into the nearest chemist's shop and provide themselves with the necessary drug at the cost of a few pence. Or, if the modern St. Croix be curious in poisons, and affect something more *recherché* then arsenic or "black drop," he has only to scrape acquaintance with the doctor's assistant, through the medium of a friendly pipe, and express a wish to try the effect of strychnia upon the feline species, and the drug is placed at his disposal without hesitation or question. Does a wretched woman, driven to desperation by the brutality of a drunken husband, come to look on self-murder as the only escape from an amount of misery too great to be endured—the ever-ready chemist furnishes her with the deadly draught as willingly as the publican the somewhat less deleterious pint of beer or modicum of vitriolised gin.

Nor are the more peaceably disposed members of society, who neither seek the lives of their neighbours, nor are tired of their own, suffered to escape the perils of poison unwittingly administered. A boy of thirteen mistakes "black drop" for "black draught," or his master reads "strychnine" for "salicine," and a human life pays the penalty of the blunder. Another puts tincture of opium in a bottle labelled "tincture of rhubarb," and the lives of a stage-coach traveller and his own wife are sacrificed to the inadvertence. Mr. Hopkinson, chemist, "addicted to intemperance," and who has since died from *delirium tremens*, entrusts the dispensing of drugs and the sale of poisons to his spouse, and the unhappy woman avails herself of the facility thus afforded by swallowing poison enough to destroy half-a-dozen lives. At Wadworth, near Doncaster, a child is taken ill, and the mother goes to a small shop for a dose of paregoric. She is served by mistake with laudanum, and the child dies in consequence. All these instances have occurred within one brief fortnight, and more might be mentioned; and even within the last few days we read that four cases of poisoning have been received in the London Hospital. We fear it will require an abler head and a stronger arm than Sir Peter Laurie's to "put down" suicide; but we have a right to ask, how long are these frightful facilities for murder and self-destruction to be allowed to exist? In continental towns the sale of even ordinary drugs is hedged round with every restriction that can obviate their indiscriminate use. Can we have no Maine Law against the sale of poisons? Or, if it be impossible entirely to prevent their being sold without the certificate of a medical man, is it too much to expect that difficulties and precautions should be interposed, such as a printed form, witnesses, and other formalities complied with? It may be difficult —Lord Campbell, at least, last session said it would be—to draw a decided line

of demarcation, or say precisely where drugs end and poisons begin; but assuredly the legislature might deal with the more obvious and popular agents of destruction. It might also insist that all poisonous drugs should be kept under lock and key, or, as the Irish College of Apothecaries have just directed to be done, that they should be sold only in bottles of a peculiar make or pattern. One main evil, nevertheless, must ever consist in the nonqualification of druggists, and the utter absence, under the present system, of any proof that he is a fit dispenser of medicine. While this system continues, we shall have to record instances of gross carelessness, with their fatal results, similar to those above given. The pharmaceutical chemists are doing something to ensure competency and discretion in the dispensers of drugs, by voluntarily subjecting themselves to an examination destined to test their qualifications for so responsible a duty. So far they are to be commended; but a reform which embraces only a few can never be a guarantee for the safety of the many. It is for that reason that the authority of the law is called for; and with such precautions as we have indicated we should at least hear of fewer cases of poisoning by the blunders of raw lads of thirteen, and might venture to drink the time-honoured black draught with less likelihood of being lulled into "the sleep that knows no waking." At all events the evil has reached a magnitude and a frequency that call for active interference; and we trust that next session will not pass without the introduction of some measure calculated to stay this monstrous waste of human life.—*Daily Telegraph.*

DEATH FROM CHLOROFORM AT ST. THOMAS'S HOSPITAL.

On Wednesday morning considerable sensation was created in the Borough Hospital, in consequence of the death of John Gibbletts, aged thirty-five, who resided at Dacre-street, Spitalfields, under the following circumstances:—It appears the deceased was a seaman, and when at China some months ago, injured his finger. On his return to England it became so extremely painful that he went to St. Thomas's Hospital, where Mr. Sully surgeon, on opening it, found it to be a diseased bone, and told the deceased that it would be necessary to take it off; to which he consented, and requested that some chloroform should be administered to lull the pain. Mr. Fowler, the house-surgeon, accordingly at once proceeded to the operation, when the unfortunate man expired under the influence of the chloroform. The coroner will cause a most searching investigation to be made into the affair. Last night Mr. Payne held an inquest on the body. Mr. J. T. Fowler, the house-surgeon, in his evidence, stated that the patient agreed to come on Tuesday morning to undergo the operation on his finger, and he expressed a wish to have chloroform administered. He came accordingly, and witness requested Mr. Genge, another surgeon, to administer chloroform, which he did, and witness stood by superintending the operation. Mr. Genge had some experience and practice. Soon after he began to administer the chloroform, witness was called into the next room to see an accident. Genge gave up the chloroform, and came to witness to ask if he should discontinue it. As the accident was slight, witness returned to the room and ordered the administration of chloroform to be continued. The patient was then partially sensible, and he began to spit, as if about to vomit. He was violently convulsed throughout his whole frame, and the chloroform was discontinued. He had to be held by three men to prevent him from falling on the floor from the chair in which he was sitting. He was placed in an horizontal position, when his breathing was laboured, his hands grasped, and the pulse almost ceased. The tongue was drawn out of the mouth by forceps, and artificial respiration resorted to. Ammonia was held to his nostrils, and he appeared to rally a little, so as to be able to breathe without assistance, but almost immediately relapsed into his former condition. The galvanic current was passed to the region, but in a minute or minute and a half life appeared to be extinct. The galvanic action was kept up for half an hour, and he was made to breathe oxygen gas by means of artificial respiration, but it had no effect; then we knew he was

quite dead. A great deal of evidence was heard respecting the state of the man's health at the time the chloroform was administered, from which it appeared that he had suffered much from loss of blood and from *delirium tremens*, and that no inquiries calculated to elicit these facts were put to him before he inhaled the chloroform. At a late hour on Wednesday night the jury retired to consult together, and on their return, the foreman said that it was the opinion of the jury that the man was not in a proper state to undergo the operation, and wished the case to be adjourned for the attendance of the senior surgeons of the hospital. The case at half-past ten o'clock was then adjourned.

DOCTORS.

THERE is, it must be confessed, something exceedingly perplexing in the medical profession. We are subject to a vast variety of diseases; and physicians, in order to cure them, study the art or science of medicine. By dint of extraordinary natural sagacity, great practice and experience, a physician becomes so wise in the knowledge of all diseases and antidotes to death, that he acquires the character of a life-preserver. You see him driving about with supplies of health in his carriage, just like that neat cart-waggon, with its Peebles ale, dropping comfort at every door. He dies, and in some half dozen years or so, a physician, whom he had long kept down, lifts up his now undepressed head, and gets into prodigious practice. He adopts a system diametrically opposite to that of his predecessor. That which the one said would kill the other says will cure. Now the question to be answered is, which of these two men is the murderer? If it indeed be in the power of medical skill to put a patient to death, a hot, close room, with a huge fire, and nailed windows, and a cool, airy room, with no fire at all, and windows frequently open, cannot be equally good for a small child, with its face one blotch of smallpox: so on with all other complaints under the sun, moon, and stars. Fathers and mothers fall down on their knees before physicians, blessing them for having, under Providence, rescued a beloved child from the tomb; while, had they known the truth, as expounded by some future Hippocrates, they would have screamed him off the premises as an assassin. Yet the bills of mortality preserve a wonderfully nice equilibrium, and it would almost seem that both life and death laugh at the doctors. A patient labouring under an hereditary disease, say a cancer in the stomach, like Napoleon, or gout in the toe, like Christopher North, is puzzled when told that at the very fewest, his father, grandfather and great grandfather have been murdered, and that he must submit to a new regimen; the result of which said new regimen is, some hundred years afterwards, quoted to a generation yet unborn as one of the most melancholy cases on record of an invaluable life having been sacrificed to a mistaken policy of insurance. This is to us a riddle, which we wish the clever Sphinx would solve, since Œdipus is dead.—*Professor Wilson's Essays.*

FEMALE HEALTH AND EDUCATION.

THE Misses Thompson, whose select establishment for young ladies occupies a trim suburban villa, its garden separated by lance-headed railings from the turmoil of the world, and its windows screened by green jalousies from the glances of eyes masculine—whose system is supported by numerous testimonials from parents and the clergy (the last-named body being of course inspired by a divine afflatus on all educational matters), and whose study it is to combine the discipline of a school with the comforts, elegances, and affections of a home—the Misses Thompson will exclaim to one another, Health and education! what unconnected subjects!

Taken separately, however, the words are familiar to these ladies. They believe devoutly that education has been, and still is, the business of their lives; and they know that health is a blessing of which they have long despaired. Miss Thompson, especially, is a sad dyspeptic; and it is well for her pupils if heightened rubicundity of nose, or increased sallowness of skin, gives timely warning of unusual gastric irritation. Dear Mr. Pestle often assures her that the heavy responsi-

bilities of her anxious and arduous position are the sole causes of her ailments, causes beyond even his skill to remove; and that she must resign herself to a palliative treatment guided by his perfect knowledge of her constitution—to an occasional blue pill, and to a subsequent course of stomachic draughts. Dear Mr. Pestle also keeps his eye upon the dear girls, supplying steel mixtures to Miss Fanny, throwing in quinine to Miss Louisa, and suggesting cod-liver oil for Miss Jane. Little Annette, the East Indian, is well known to be a delicate plant; and for her Mr. Pestle recommends mutton chop dinners, and a luncheon at eleven, consisting of three-fourths of the yolk of a large egg beaten up with two-thirds of a small wine-glassful of sherry, and accompanied with three strips of stale bread, toasted upon one side. Mr. Pestle does not say that the dear girls sleep, work, and play in crowded and ill-ventilated rooms; that their exercise is bad in kind and insufficient in amount; or that the mental work exacted from them, although seldom conducive to real intellectual growth, is often more than a growing brain can perform with safety. He knows perfectly that on all these subjects his clients will follow their own devices; he knows that any uncalled-for and hyper-conscientious interference might transfer the school to the visiting list of some less scrupulous neighbour; and he perhaps reflects, being human, that too much health in the world will not conduce to the prosperity of doctors. If his best patients choose so to act that they require his services, why should he, who is not consulted until after the mischief is done, stand obstinately in his own light?

Mr. Pestle is a shrewd and capable man; and a conviction springing from his earliest professional experience has grown and strengthened with his gray hairs. He has found that patients consider truth to be of all pills the least palatable, and the one that requires the thickest gilding. He has therefore formed a habit of obtaining obedience from the sick, and from those around them, by couching his precepts in a form that shall harmonise with their prejudices. A little tact, a little management, a ready assent to some monstrous proposition, has often saved him a world of trouble, and has enabled him to escape the silly questions of a captious valetudinarian. But, if we can separate his medical from his worldly knowledge, and render him temporarily forgetful of the necessity of pleasing Miss Thompson—if we can persuade him to produce for our benefit the results of his observations, we shall find him possessing a profound conviction that that lady's establishment needs reformation in many important particulars. He will say that—not to mention sins against knowledge committed for the sake of cheapness—Miss Thompson and her assistants do not discriminate between teaching and education; or, if they discriminate, elect the former as their idol, and pay adoration to the calf they have set up. Uninformed, not only of the philosophy, but of the very mechanism of the mind, they know neither how to guide its growth nor to control its operations. The ardent religious emotions of the young are regulated and directed by questions upon the generations of Abraham, or the longevity of the patriarchs; the intellect is set to thrive upon French and German verbs; and the memory is assiduously cultivated to procure present remembrance, without regard to the method or the permanence of recollection. The feelings that most adorn and beautify the female character—that sanctify, in all hearts not brutal, the social relations of woman, are left to struggle to maturity as they may; and the girl's probable future is ignored, until the arrival of a child's valentine, or the second chance meeting with a hobbard-dehoy, is invested with the romance of an adventure and with the gravity of a crime. An explanation of all this, Mr. Pestle thinks, is to be found in the fact that parents trust to the presumed skill of teachers, and accept superficial acquirements as a criterion of success. To obtain them in the easiest and cheapest way becomes the object of competing schools, with reference only to the fallacious test adopted by the public. Before the true test is applied by the events of life, time and circumstances have obscured the links between the child and the adult. The religion that produces no humility and

affords no support, the uncontrolled impulses and feelings that work so much misery in the world, the intellects that are inadequate to simple duties—all these are familiar to those who look for them. How far they depend upon the inherent weaknesses of human nature—how far upon defective early training, is a question that does not admit of precise determination. As long, however, as early training is visibly defective, such results may be expected from its shortcomings, and may, in some measure at least, be ascribed to them. As long as schools can be improved, the time for calling upon Hercules has not yet come.

That girls' schools are susceptible of improvement, we imagine few grown-up women, who have had experience of them, will be found to deny. The scholastic profession, like some others, needs a stimulus from without. Necessarily guided by empiricism in bygone times, its members are unwilling to recognise a more safe foundation for their art. Grinding on, year after year, in the same weary circle of monotonous routine, they are dazzled by the light which science would throw upon their track. For, indeed, through examination of the principles which have been found to govern the development of the human body, and the gradual unfolding of the faculties of the human mind, a true educational law may be laid down,—a law adapted alike to masses and to individuals, providing for the exceptional cases to which it points, limited to no system, working by no narrow rule, but requiring intelligent action from those who would utilise its vast simplicity From it springs the necessity for coupling health with education. It repudiates that tripartite division of the human creature in which so many seem practically to believe, and which assigns the soul to the minister, the mind to the teacher, and leaves only the body to the physician. It teaches that these portions of the whole are too intimately blended in their workings to be separated by human ken, and that none of them can be disregarded in dealing with the others. It teaches that the visible evidences of mind, and the means of influencing them through outward agencies, are entirely dependent upon the integrity of the brain—the organ which materialists deem to be the source, and spiritualists the instrument, of the higher faculties. The integrity of the brain is equally dependent upon the welfare of the body, or, in other words, upon health; and whatever deranges or destroys health, will disturb or pervert the intellectual operations. Moreover, the brain, like any other member of the system, requires food, rest, and regular employment of all its powers, in order to its symmetrical and healthy growth. Through failure in the last respect—an event lamentably common—we may recognise a sort of mental distortion, or one-sided growth, which must always curtail usefulness, and which often predisposes to insanity. To overload the memory, for instance, while the power of reflection remains dormant and unexercised, is to copy the faquir, who stands upon one leg until the other is useless and inert.

Our present knowledge of the laws of health and growth being the result of patient inquiries extended over many years—inquiries of which the earlier results are pretty generally known, while those last attained are, as yet, more or less confined to their enunciators—it follows, almost of necessity, that in a school conducted upon the good old plan, there are some practices that everybody knows to be wrong; and some, perhaps equally hurtful, that many persons would defend. The first class have, generally speaking, direct reference to the bodily welfare of the pupils, and include matters of diet, temperature, ventilation, and various domestic regulations. Abuses in these things are often traceable, as we have already hinted, to a desire for improper cheapness —that modern Moloch whose worship causes our sons and our daughters to pass through the fire indeed. Teachers practise, and parents tacitly sanction, what they well know to be wrong; each individual expecting to escape a penalty of which the payment is not quite certain. Reform is only to be hoped for through a general conviction that all tampering with health is bad economy, and will cost money in the end. Even then the present would often outweigh the future, on the principle laid down by sanitary reformers. People, they say, will only take proper

care for the preservation of their bodies when they extend the same foresight to their souls. A conviction of the general hopelessness of the case induces us to be content with a single illustration of these malpractices, and to select the one that is perhaps easiest of remedy. Where girls sleep eight or ten in a small room, a change would require a new house or a reduction in the number of pupils—sweeping alterations which might not prosper, and which, we are pretty sure, Miss Thomson will not, at present, carry into effect.

The illustration will be found in the very common, perhaps universal custom, of furnishing a school with stools and forms in lieu of ordinary chairs. This is a direct sacrifice of health to parsimony. The stools cost little, and are conveniently moved from one room to another. All mistresses know, however, that the spine of a growing girl is unable to support constantly the weight of her head and shoulders. Nature teaches leaning as a means of relief, by which the weight is lessened, and the free action of the chest not impeded. But a girl who sits on a stool cannot lean, and her spine bends. The resulting deformity may be permanent or temporary; an abiding curvature to one or other side, or a mere rounding of the back removable at will. But all such distortions, while they last, if only for five minutes, have a bad effect that is commonly forgotten. They confine the chest and hinder respiration, limiting the quantity of air admitted into the lungs, and producing effects similar to those of a vitiated atmosphere. This is no light thing. To place a girl in such a position, for several hours daily, that her chest cannot expand with freedom, is to subject her to a kind of slow poisoning. Those who have narrow chests become, under such treatment, pallid and listless, their hearts beat violently on exertion, and they are rendered dangerously prone to lung diseases. The majority show little amiss, and Miss Thompson speaks of the excellent health of the girls under her care. But to all of them a little mischief is done every day, their standard of health is lowered, and their power to resist hurtful influences is diminished. Schoolmistresses cannot be ignorant that they do wrong in using these stools, but they seldom know how wrong: they believe, perhaps, that the evil cannot be great, as the public appear neither to perceive it, nor to apply any pressure for its removal. Many ladies are content if their pupils escape being permanently crooked, not reflecting that the last straw is required to break even the camel's back. Young ladies will forgive us the implied analogy, when they remember that all backs are the handiwork of one Great Artificer.

School-keeping is regarded somewhat in the same light as needlework; or as an art which all women are competent to practise. Captain Brown, of the service of the Honourable Company, falls an early victim to the insalubrity of the Indian climate; and his widow thinks that a school would be of material assistance in providing for her own little ones. Or the Reverend Jonas Smith is removed from the weary labours of an ill-paid curacy; and his death leaves a delicately nurtured lady to struggle alone with the hard and bitter world. Or the Misses Thompson themselves, after years of patient drudgery as hired teachers, think to end their days in comfort by hiring others. So, through the fine Indian connection, or through the sympathising parishioners, or through the grateful efforts of former pupils, the lease and goodwill of Prospect Villa are obtained, the last proprietress retires to spend the evening of her life in peace, and the new school is commenced, with all usual assistance from skilful resident and visiting teachers. Let us hope that it will be crowned with success. Who does not honour the brave women who enter upon its duties? Who does not know the ever-widening circle of charity and kindness that will result from their prosperity; the relatives that they will support; the feebler friends that they will assist with timely hand; the good deeds that they will do in secret, hereafter to be proclaimed and rewarded in the sight of men and angels. Let us not say one word to diminish their hard-earned gains, or to curtail their noble usefulness; but we would advise them, then, to seek, and we would advise their clients strictly to require from them, some knowledge of the laws which govern the wellbeing of the human body and the

operations of the human mind. Physiology and psychology, in spite of their hard-sounding names, have long ceased to be abstruse mysteries; and may be understood, sufficiently for the management of a school on enlightened principles, by a course of accessible and not lengthy reading. They would teach how to strengthen those weak points of character, which are, in some degree, inevitable as results of the female constitution; but which are often morbidly and unnaturally defenceless. We complain with reason that the teachers of girls' schools are seldom guided by any definite principles in educating the feelings and the intellect of their pupils; but expect what is good and right to come of itself as a result of teaching: much as if a watch could be set in accurate movement by labour spent upon the polishing and decoration of its dial-plate. The power of self-control is seldom diligently exercised; the power of reflection, of looking inwards, of gaining self-knowledge in its true sense, is left to be the growth of chance: and the purely intellectual faculty, the power of comprehension, instead of being constantly employed upon objects within its grasp, is neglected, in order to overload the memory. Often joined to all this is a forcing system which encourages overexertion of the growing brain, with all its concomitant and attendant evils; and which, among the elder girls, or among pupil teachers, who are excited by emulation or necessity to neglect the friendly warnings of fatigue, is often a source of lamentable bodily and mental failure. The young lady who springs upon the nearest chair at the sight of a mouse or a spider, is perhaps a greater curiosity now than formerly; although, even now, not seldom met with. She is more common who expresses any slight mental agitation by energetic bodily movement, by scream, start, and gesture; and the greater frequency of such actions among girls than among boys does not need to be described. It is well known to arise from one of the characteristics of the female organism; and this, when unduly developed, amounts to the excitability which renders girls liable to hysteric fits from fright or other sudden emotions; preparing them for various injurious influences. The way to combat it, and to keep it within proper and healthful bounds, is by means of exercise—exercise of a kind which strengthens the habitual authority of the will over the limbs, which employs body and mind together and in unison, and cannot be performed without their co-operation. Such is afforded by all active games of skill. Boys have fencing, cricket, and a score of other pursuits, with this tendency. School-girls commonly do nothing but walk languidly in a row, along the same familiar and tiresome road; often reading or learning tasks by the way, as if to shut out the possibility of any observation of nature. Sometimes they practise dreary exercises, a caricature of drilling, invented by a famous schoolmistress, who, upon the decline of an aristocratic connection, secured an evangelical one; and became suddenly convinced of the sinfulness of dancing, for which these exercises were her substitute. They involve only attitudinising and imitation; while girls want games in which their judgments shall teach them what they ought to do, and in which practice shall teach their hands to execute what their heads have planned. Battledore and shuttlecock, jeu de grace, and archery, would fulfil these requirements; and are in all respects well adapted for girls. But then, Prospect Villa must have a suitable playground, and the mistress must understand its uses, and the way in which it will conduce to the proper training of her pupils.

(To be concluded in our next.)

SOLOMON IN THE NURSERY.

CHAP. II.

NEVER, we reiterate, give a child what it cries for except upon the condition that it ceases crying, supposing, of course, that what it cries for is lawful and fitting for it to have. And here let us turn aside for a moment to gain a lesson from that child of nature, to whom, whenever speaking of women and children, Dr. COFFIN is so pleased to refer, namely, to the Indian woman of the American woods. The Indian mother, untaught as she is in the lore of civilised society, has, nevertheless, a philosophy implanted within her, and in nearly al lthat we esteem as gracing

and dignifying humanity, will, we fear, rank far higher than the great bulk of the fair daughters of Europe. The Indian maxim is, that "crying is good for a child, and makes it grow;" and the mother will sit quite composedly and listen to the cries of her little one, unless, indeed, she knows it to be unwell. This may appear cruel; but when we know the intensity of affection for their offspring of these mothers of the woods, we feel assured it is no want of feeling that renders them so unmoved. On the contrary, the opposite plan so universally pursued by *our* mothers of coaxing and fussing with "fractious" or passionate children is far more cruel; for, although the immediate object may be gained of quieting, yet the seeds of an overbearing and tyrannical disposition are sown, which, fostering under the same mistaken care, will ultimately bud forth, to the misery and dismay of the distressed parents.

While we have the Indian parent before us, let us glance at her mode of *physical* training for her baby, though perhaps we have heard of it before. One thing she never does—give her child animal food till it is capable of masticating it. She suckles her child from eighteen months to two years; but as the Indian children rarely cut their teeth until they are twelve months old, this is not too long, though we are not, of course, prepared to recommend such a practice to English mothers. During the sugar season, the little one has sugar and syrup as its spoon-food, and the simplicity of its diet for these early days of its existence produces the natural result of freedom from any sickness or pain in teething. The Indian mother smiles at the idea of pain attending the cutting of teeth; but she would not smile, but, on the contrary, grieve, to see the stuffing plan pursued by the civilised white woman, of "bits," and "drops," and "tastes," on that profound plan of reasoning, that "what's good for the mother" (with her full-grown, hard-set frame—mouth full of solid, grinding teeth—and with her daily labours, and therefore waste of substance) "is good for the child" (with its tiny, soft and pliable bones and muscles, its mouth furnished only with velvet-like cushions, where the teeth *are* to come, and its daily round of sleeping rest). The natural instinct, to use no higher term, of the wild mother (how much more *tame* than many of ours!) would tell her that no child could be well with such treatment, or perform rightly any of its functions. The Indian infant never "pukes," or brings up its food in a curdled state; for its stomach never receives aught but nature's food, and, consequently, no acid forms. And this same food comes to it from a pure fountain, and not one vitiated by draughts of porter, ale, or spirits; by high-seasoned food, or by the wishy-washy stimulants of tea and coffee. To resume. We cannot sufficiently impress upon parents the great importance of never giving way to the crying or passionate demonstrations of "baby." If what it is crying for is clearly what, under any circumstances, it should not have, no hopes whatever must be held out to it; but if it is a thing it may have, then make the condition of absolute ceasing from crying, and from all impatient demonstration, before it is allowed to get it. Indeed, if you were to specify a space from the moment of the crying ceasing before the desired object was granted, it would be better. Say, "now exactly one half (or one whole) hour after you have left off crying you shall have it," adhering strictly and punctually to this, and you will teach a lesson of self-control most valuable; and also, by the desire for possession ceasing with the mere passion that raised it, which will often be the case when such a period of reflection is enforced, you will teach also the absurdity of shewing temper for what is really so unimportant. Of course, in the case of infants in arms, you cannot give them any idea of what half an hour is; but pursue a similar plan, and do not give, even to a baby, what it cries for the very moment it ceases, but wait for it to cool down and reflect, for reflect it does. The great lesson, indeed, that is capable of being thus early taught, is self-control; and surely this is the foundation of all that is great and noble in man or woman either. How inexpressibly foolish and little do we not all feel a man or woman to be who cannot control him or herself! who falls into "passions," "sulks," "fits and starts" of temper, &c.; and how grieved is many a fond parent to see the

signs of such an unstable frame of mind in its offspring!

Another vicious practice is, when a child falls or knocks itself against something and cries, which it often does, although the injury amounts to no more than a momentary pain, or merely, perhaps, a fright, to pet it and vent expressions of disgust on the object against which it struck, as "naughty chair," "bad floor," "beat the floor for hurting my pet," &c., the little one being led to vent its anger for the pain caused it by thrashing the floor, chair, &c., with papa's stick. This may appear absurd; but the fact is, it leads inevitably to a vindictive, revengeful disposition, and many a "spiteful" child, as it is called, may date its spitefulness from this sort of training, which is, in truth, nothing less than cultivating the basest passions, and causing them to bud forth long, long before they should have a chance of developing themselves. The writer has many instances before him of the opposite training, and calls to mind several happy results of the same. One mother never allowed that the hurt or pain to her child was worse than that caused to the object causing it, and if a fall or a knock produced a cry (excepting, of course, in cases of severe injury, and then, of course, there was "something to cry for"), she would immediately put on a look of gravity, and, rubbing and caressing the chair or floor, as the case might be, say "poor chair, see how you have hurt it!" The result would be a stoppage of tears, and a stare of wonder and incredulous examination of the object thus addressed, and generally an agreement in the mother's consoling words; for, joining with her in stroking the "poor chair," the child's pain was forgotten, and its sympathies entirely diverted from its own inconvenience. This appears very simple, but the result in that child was, that it preserved that tenderness and sympathy for pain and injury beyond itself, and, rising to man's estate, possessed what is one of man's noblest possessions, a tender, generous, sympathising heart, combined with a gentle spirit. It is by attention to these, and a variety of what may seem to the unthinking "trifles light as air," that an infant is to be trained. Straws thrown on the current mark its course, and unless we are constantly on the watch for the multitude of little signs that denote the rapid and ever-varying stream of a child's existence, we shall fail in navigating successfully the precious bark entrusted to us.

Endurance is a kindred power to that of control, and is another lesson most suitable for the nursery. Children are impatient of restraint, and if this impatience, is gratified the consequences will be very painful. Do not notice every little accident that a child meets with in its play or various pursuits. Some overtender mothers and nurses are ever on the watch for these; and if Tommy sprawls on the floor, Eddy tips up over the corner of the rug, Lizzy falls off a chair, and so on, a rush and an exclamation from mama or nurse follows, and an anxious inquiry with a look of alarm is made if "my darling is hurt." "My darling" naturally supposes, from this alarming display, that he or she was within an ace of something very dreadful, and accordingly cries lustily from sheer fright, and it becomes thereafter a fixed principle to cry out and squall upon the least disturbance of equilibrium. Whereas, if no notice had been taken, the youngster would have gathered himself up and thought nothing about it. It is amusing to see a child just getting to that age when a bump more or less is of no great consequence, but who has been brought up to entertain these alarming views of falling out of the perpendicular, pick himself up from a fall, and cast a look around to see if any one is looking. If but one sympathising eye catches his, off he goes into a squall, but if no one notices his mishap, he makes a face and gives one whimper from sheer habit, but then runs on to continue his play. The knocks and falls we get in the hard world around us, when we have to battle with it, make us look back with a smile on what we thought the hard times of childhood; and the earlier we learn to endure pain and inconvenience without flinching or restiveness, the better for us, and the easier our combat with the difficulties the most fortunate of us must meet with.

CORRESPONDENCE.

To Dr. Coffin.—Sir,—Through attending some of your lectures, and seeing the benefit derived by some of my shopmates from your system of attacking disease, I have tried it for myself and family. I have had the misfortune to be compelled to have one of the faculty in to attend one or the other of my children on an average six months in the year; and it was always the scarlet fever they had, according to the doctor's account; so at last I made up my mind to try what I could do for them myself. I mixed up the medicines recommended for intermittent fever, and it cured them at the cost of a few pence. One of my children was attacked with the cholera, and, after the doctor had given it up, your anti-cholera powder did it good. I have been a great sufferer from my infancy, and therefore have been under several of the most eminent of the faculty, and they all failed in their attempts to do me any good; and in each case, after several weeks swallowing their draughts and pills, they have told me to go in the country, or that I should be better now the cold or warm (whichever season was coming) was setting in. Sir, some time before coming to see you, I was attended for spitting of blood by one of the faculty, and he told me the same thing (of course the cold was best, as the cold weather was coming); but I found he was mistaken, for, in the course of a month, I was as bad as ever. I then came to see you, as my disease was not a common one, but that the whole system was entirely out of order, which you told me was general debility. You gave me a powder and a draught, and, by strictly following your instructions, my system is completely altered. I cannot say yet you have cured me; but I have every hope, by continuing as before, you ill make me a complete cure. I take this mean of returning you my sincere thanks for past kindness, and wishing you will make this public through the medium of your Journal,

I remain, your humble servant,

John Wall.

44, *Wootton-street, Cornwall-road, Lambeth.*
May 14*th*, 1855.

P.S.—I sincerely thank you for your kindness in giving me medicine and advice gratis ever since the commencement of September last. Being a poor man I should not have been able to have had the same, if I had been compelled to pay for for it, as 3*s*. 6*d*. a week is a great sum to me, as I have a young family to support. Again I thank you.

To the Editor of the Botanical Journal.

Sir,—The fact of my son, aged twelve years, being cured of scarlet fever in four days, has induced me to send the case to be inserted in the *Botanical Journal*.

On Tuesday, the 7th, on account of the very unusual appearance of my child, I sent for Dr. Coffin, who stated that the child had got the scarlet fever, and prescribed two bottles of medicine, which I promptly administered; and, to my great surprise and joy, by the 10th, all fever had entirely disappeared, leaving the child very little the worse by the attack. I have seen the wonderful effect of botanic medicine before in whooping-cough, measles, severe colds, and fifty times in croup, and in every case the same quick and happy result has been obtained, without being followed by general debility, or any of those complaints that we are so accustomed to hear of after the use of mineral medicine.

I remain, Sir,

Yours respectfully,

Henry Moore.

22A, *Upper Marylebone-street, London.*
October 14*th*, 1856.

NOTICE.

We are glad to inform our friends that we have able representatives in the important town of Glasgow, in the firm of Messrs. Mooney and Co., 149, London-street, 47, Charlotte-street, and 52, Charlotte-lane, where the goods of Mr. Ford can be obtained in all their purity; and from the energy and skill of these gentlemen we anticipate the best results, one of them being well known to us personally, and whose contributions to our Journal render him well known (in a literary point of view) to our readers.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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No. 222—Vol. VII. SATURDAY, NOVEMBER 15, 1856. Price 1d.

PRECOCIOUS CHILDREN.

(Concluded from page 170.)

In the preceding number of this Journal, we invited the attention of our readers to this subject We resume it, because we believe it is not sufficiently considered by parents and those who have the charge of young children, and because we are convinced that the future health and comfort of thousands of human beings have been most seriously damaged by the injudicious treatment they have received in their early days. The prevention of a great mischief to the human race, is an object worthy of repeated efforts; and that object will be accomplished, if young and inexperienced parents will condescend to take the advice and profit from the experience of those who have spent many years in making observations in relation to this subject.

It is true, that in the children of any given family, there is a great similarity in outward conformation and general expression of countenance. But it is equally true, that in the same family, there may be found, upon a close and discriminating investigation, the greatest conceivable diversity of physical temperament, and mental or intellectual power. And yet, it will be found most generally, that the children in the same family are all subjected to the same physical, mental and moral treatment. Some parents even make a boast of the sameness of their treatment of all their children, not knowing that diversity of materiel requires diversity of treatment in the process of aiding its development. A father who had a large family, and more wealth than wisdom, said, "I treat all my children alike; I do not make fish of one and fowl of another." He was so self-complacent and self-willed, that all attempts to convince him that it was quite possible that one child might differ from another, almost as widely as a fish from a fowl, and therefore that one child needed an opposite method of training to that required by another. This father had but one idea for his counting-house, for his home, for his nursery, and that idea is expressed by the Yankee phrase "go-a-head." He had buried three children, who were all considered prodigies in learning, and yet it never occurred to him or his wife, that the death of these children was hastened, most unintentionally, but not on that account less certainly, by the injudicious and unreasonable demands made upon their intellectual faculties, to the neglect of those means which, prudently and perseveringly applied, would in all human probability have secured a healthful development of the physical system to sustain the mental exertion required. In reference to the three children just noticed, it may be necessary to observe that they were all of a *nervous* temperament, with its usual and most unmistakeable symbols of flaxen hair, bright blue eyes, and pale complexion. The only surviving child in the family of the same temperament, is a little boy, who, when about two years old, left home with his mother, to visit a married but childless aunt. This aunt had bought experience at a very high price, having

buried four children. She obtained permission to retain her little nephew, who, by rambling in green fields, inhaling pure air, taking the wholesome food a farmhouse affords, and by having his attention occupied with all kinds of toys and childish games, acquired a strength of constitution to which his other fair brothers and sisters never attained. And though this child has now reached his twelfth year, and is tall, robust and intelligent, far beyond his elder brothers who have been at school from their cradle, yet the father cannot be persuaded that the life of this child has been spared because he was not forced on with his mental education until his physical system had had time and other helps for its development. The emphatic advice which we give to parents, and which we are prepared to sustain by a host of facts, is, Direct your undivided attention, during the first five years of a child's life, chiefly to the development of its physical faculties. This advice, so far from discouraging any attempts in early education, includes a powerful motive to commence the education of the outer man, as preparatory to the higher education of the inner man. Every healthy babe has within it an impulse to self-education: the eye seeks for objects on which it may be exercised to acquire the power of accurate vision; the ear takes in the different sounds, and distinguishes between the melodious and discordant; the little hands touch the variety of objects, and thus aids the development of a sense, as it gradually discerns between rough and smooth, cold and hot; it is so in reference to the other senses, tasting and smelling. Action of the limbs is another exponent of the self-educating impulse. The parent's duty and care should be, during the first five years, directed to the watching and guiding of these self-educating impulses, and particularly should this advice be attended to where the temperament of the child is nervous. Children of this temperament should have nothing to do with books, except to be pleased with the elegant binding outside, or the pretty pictures inside.

In reference to children of a *biliary* or *nervo-biliary* temperament, the same advice, if anything, should be more rigidly observed, for this reason: the pure nervous temperament may be wrought on, and a precocious advancement in knowledge may be the transient reward for the teacher's labour; but, in the biliary and nervo-biliary temperament, the perceptions are not usually very quick, and consequently the child is put to a large amount of physical suffering in making any attainments, and not unfrequently *hydrocephalous* disease, or water on the brain, follows. We conclude this paper by urging parents to give this subject their very best and closest attention, as thereby they will save themselves much pain, by averting the bereavement of their children, and prevent their children from sufferings which would follow them through life. There are parents, who now are mourning the loss of six and seven children, who, had they but had the hints this paper contains, and acted upon them, those children would now have been their present joy, and the comfort of their declining age.

THE BATTLE OF THE DOCTORS; OR, SCIENCE BEWILDERED WITH FACTS.

Once more we mean to write on a subject that we know nothing about; but we write with a pretty firm conviction that nobody knows much.

Last week, in illustration of the character of the age we live in, we remarked that we were confounded with facts; we specified particularly politics and medicine; but that was merely by way of not complicating the subject. Robert Hunt, an eminent chemist, in his work on the *Poetry of Science*, says of chemistry, one of the most exact of the experimental sciences—"Chemistry is now in that state which almost causes a regret that any new organic compounds should be discovered, until some industrious mind has undertaken the task of reducing to a good general classification the numerous mass of valuable matter which has been accumulated, but which, for all practical purposes, remains nearly useless and unintelligible to the many."

Broad general principles or outlines are indispensable; they are the first things to be learned, and most easily understood; they are sketches which include every-

thing; whereas, little facts are merely the tracery or gingerbread work which embellish or belong to fractional parts of the building. By trying to particularise these, we lose the power of classification, or of appreciating great collective truths.

Medicine is one of those sciences the principles of which ought to be very generally distributed amongst the people. If any knowledge can be called useful knowledge in a special manner, it is medical knowledge. It ought not to be a mere Latin Bible in the hands of a priesthood, but a vernacular book which people may read and understand on an emergency, or a tradition which ought to be instilled into their minds in early life, not so much in the form of special facts as of principles. But of medical principles people are almost utterly ignorant. Most families are quite helpless now in all emergencies. They dare not do anything, but send for the nearest doctor. They know not what to do, and they are generally and wisely instructed not to doctor themselves, for the popular ignorance is so great, that they are more likely to do wrong than right.

Here is a great fact. Popular ignorance of medicine is excessive. Medical science, such as really deserves the name, is confined to the heads of a very few.

Hence people in general have idols in medicine. All women have. "Go to Dr. P., he did me so much good!" "Oh, Dr. R.'s the man," says another; "I should have no confidence in any other." When you are ill it is generally a somebody who is recommended; a principle or treatment is rarely mentioned, or if so, it is merely mentioned as something that did somebody so much good, and you are confounded with the variety. There is no intelligence displayed of the nature of diets, and the action of medicines. It is all chance; so much so that the most contradictory and bewildering opinions are given. For instance, Dr. Rowland East, in his advice to the bilious, says veal is extremely easy of digestion; Dr. Beaumont, in his tables of the digestibility of the various articles of diet, enumerates roasted veal, pork, and salted beef as the most indigestible of all popular meats. Dr. Beaumont says both turkey and goose are easily digested; Dr. East says goose ought to be avoided by weak stomachs. Dr. Beaumont says all wild fowls are difficult of digestion; Dr. East says game is easy of digestion. Dr. Beaumont says domestic fowls are difficult of digestion; Dr. East says, easy of digestion, duck and goose excepted. Dr. Beaumont says cabbages are very digestible; Dr. East says they are not. There are many other discrepancies; these are a specimen. Is it to be wondered at, when these two gentlemen are called to consult over a patient with a weak stomach, that one should recommend veal and chicken, and the other condemn them as the worst and most unsuitable diet for the victim? and that if one was chosen in preference to the other, and the patient should die, the discharged doctor should accuse his rival of murdering the patient through ignorance? It is possible that by some difference between the gastric juices and biles of different stomachs the two contradictory facts may be reconciled; but this just shows the inefficiency of fact knowledge, without the principle that we speak of.

The people at large know no more of medicine as a science than they did in the middle ages. We knew an old man who had lived nearly a century who never took anything but brimstone and treacle for all his ailments; another, an octogenarian, only Epsom salts, and a little senna occasionally. We suspect that popular knowledge of medicine seldom exceeds this, if it even attains to it, and the science is as pure a blank in the minds of all classes as if it had no existence.

If you take up a work on *materia medica*, say Professor Royle's, or the *London Pharmacopœia*, you find the list of medical substances quite overwhelming —no individual mind could retain them. It might as well attempt to commit to memory *Webster's Dictionary* with all its definitions and quotations. And yet neither of these is so copious as the continental pharmacopœias. The Austrian pharmacopœia contains seventy-one plants that are not mentioned in that of the London College of Physicians. That of Bavaria contains an additional thirty-one, and the Prussian contains an additional twenty-nine, making a total of one hundred and thirty-one medical plants not

used in this country at all, though sixty-four of them are indigenous to Britain. This shows that the matter-of-fact confusion is greater on the continent than here; and that, perhaps, is one reason why the tendency is greater there to go back or forward to great principles. One of these principles seems to be the use of the very strongest poisons in infinitesimally small doses. Homœopathy uses the direst poisons, even that of the cobra di capella; there is nothing too frightful for it, for it disarms it by minimum quantity. The court physicians of Prussia, Russia, Hanover, Naples, Austria, Spain, Lucca, Saxe Coburg, and many other states, are homœopathic physicians; and in all the great cities of the continent there are homœopathic hospitals and institutions, which are competing successfully with the old system in the treatment of all diseases incident to humanity; and in Paris the two systems even work hand in hand, or competitively together, in the same hospital; for the Hospital Beaujon in that city has for several years devoted one hundred beds to patients who are treated on the homœopathic system. Statistics also are carefully kept, which tell wonderfully well in favour of homœopathy in curing more efficiently, more rapidly, and more economically, all sorts of diseases. Nor are these statistics the work of interested parties, but neutrals or enemies. Thus, for instance, on the late visitation of the cholera in London, the Homœopathic Hospital invited the Board of Health to send a medical inspector to examine its cases. They sent Dr. M'Laughan, an opponent of homœopathy. His opinion, in a letter addressed to the directors of the hospital, is thus expressed: "You are aware, gentlemen, that I went to your hospital prepossessed against the homœopathic system, that you had in me in your camp an enemy rather than a friend, and that I must therefore have seen some cogent reason there the first day I went to come away so favourably disposed as to advise a friend to send a subscription to your charitable fund; and I need not tell you that I have taken some pains to make myself acquainted with the rise, progress, and medical treatment of cholera, and that I claim for myself some right to be able to recognise the disease, and to know something of what the treatment ought to be; and that there may be therefore no misapprehension about the cases I saw in your hospital, I will add that all I saw were true cases of cholera in the various stages of the disease; and that I saw several cases which did well under your treatment, which I have no hesitation in saying would have sunk under any other. In conclusion, I must repeat to you what I have already told you, and what I have told every one with whom I have conversed, that, although an allopath by principle, education, and practice, yet was it the will of Providence to afflict me with cholera, and to deprive me of the power of prescribing for myself, I would rather be in the hands of an homœopathic than an allopathic adviser."

The deaths in the various London hospitals by cholera under allopathic treatment were 36 per cent., in the homœopathic hospital only 16 per cent. But the committee of general inquiry, influenced by the regular physicians, or the Established Priesthood of Health, refused to publish the homœopathic statement in their general report to the Board of Health.

The Pope will not suffer a Protestant's gravestone to be inscribed with the "hope of a blessed resurrection." Even a Puseyite will not allow that a Dissenter's soul can be truly healed in a Dissenting chapel. His list of the saved would include the names of Episcopalians only. It is the old story. Without taking any side, for we cannot judge between the two, we are glad to see old dogmatism attacked and its illiberality exposed. We believe there is truth in both systems, as we believe there is truth in all sects and parties; but the real truth, the common principle of truth, is unknown to any one of them.

And that this is the case with the established school of medicine we have the testimony of their most eminent men. Boerhaave, a physician of world-wide celebrity, says, "It would have fared infinitely better for mankind if medical men had never existed." Dr. Pereira, the greatest authority on *materia medica* in the English schools of medicine, agreed

with Sir Gilbert Blane, that, "in many cases the patients get well in spite of the means employed; and sometimes, when the physician fancies he has made a great cure, we may fairly assume that the patient has made a lucky escape." Girtauner says, "The art of healing has *no fixed principles:* and where all is conjecture, one conjecture is a good as another. Who would waste his time in searching for a few particles of gold in that immense dunghill which physicians have been collecting for these two thousand years?" Kieser says, "The doctor is more dangerous than the disease." Hansen, "that medical science is rather a means of preventing over-population than the art of saving lives." Professor Gregory, "that ninety-nine out of every hundred medical facts are so many medical lies, and that medical doctrines are for the most part stark staring nonsense." Dr. James Johnson, late physician to William the Fourth, "that there is as much quackery in the profession as out of it, and that if there was not a single surgeon, apothecary, man-midwife, chemist, druggist, or drug on the face of the earth, there would be less sickness and less mortality than now prevail." Dr. Billing, author of the *Principles and Practice of Medicine*, says, "I visited the different schools of medicine; and the students of each hinted that the other sects killed their patients." Dr. Paris, the President of the London College of Physicians, says, "that the file of every apothecary would furnish a volume of instances, where the ingredients of the prescriptions are fighting together in the dark." The *Medical Gazette* says, "Could all the consequences from the use of mercury alone be brought together and comprehended in one view, it would be impossible for the human eye to look upon a scene of greater devastation and horror."

All these testimonies, and they might be multiplied by hundreds or thousands, are uncontrovertible evidences of a *matter-of-fact* confusion; that is, a confusion arising from accumulating facts, so numerous, so contradictory, and so bewildering, that no human understanding can make a profitable use of them. The profession themselves are confounded, and the people give it up in despair, and have actually retrograded in medical knowledge, knowing no more than the salts and senna, the brimstone and treacle, of this boasted science.

What then shall we do? Shall we abandon the knowledge or collection of facts? Not a bit of it; but abandon sect, and refuse no fact because of the quarter it comes from. We rather say, begin the collection of facts; for sectarians and partisans cannot collect facts; they reject them. They reject everything that does not support their own school. The time must come when this diabolical sectarianism must be abandoned in every department of thought; it is a satanic possession, which irritates the mind, kindles the passions, and disqualifies the understanding for judgment. Better have no school at all than such a host of embattled schools, tearing one another to pieces like black and red ants.

"One day," says Thoreau, "I went out to my wood-pile, or rather pile of stumps, and I observed two large ants, the one red, the other much larger, nearly half an inch long, and black, fiercely contending with each other. Having once got hold they never let go, but struggled and wrestled and rolled on the chips incessantly. Looking farther, I was surprised to find that the chips were covered with such ants, that it was not a duel, but a battle, a war between two races of ants, the red always pitted against the black, and frequently two red ones against one black. On every side they were engaged in deadly combat, yet without any noise that I could hear, and human soldiers never fought so resolutely."

Which party had truth and justice on its side? Each ant was a hero, and each had a Satan in it, none the less ferocious because of its littleness, for the smaller the size the greater the ferocity.

"I watched a couple that were fast locked in each other's embraces. The smaller red champion had fastened himself like a vice to his adversary's front, and, through all the tumblings on that field, never for an instant ceased to gnaw at one of the feelers near the root, while the stronger black one dashed him from side to side, and as I saw, on looking nearer, had already divested him of several of his members. They fought with more

pertinacity than bulldogs. In the meanwhile there came along a single red ant on the hill side of the valley, evidently full of excitement, who either had dispatched his foe or had not taken part in the battle. Probably the latter, for he had lost none of his limbs. He saw the unequal combat from afar, for the blacks were nearly twice the size of the reds; he drew near with rapid pace till he stood on his guard within half an inch of the combatants; then, seizing his opportunity, he sprung upon the black warrior, and commenced his operations near the foot of his right fore-leg, leaving the foe to select among his own members. I took the chip on which the three were struggling, carried it into my house, and placed it under a tumbler on my window-sill in order to await the issue. Holding a microscope to the first-mentioned red ant, I saw that though he was assiduously gnawing at the near fore-leg of his enemy, having severed the remaining feeler, his own breast was all torn away, exposing what vitals he had there to the jaws of the black warrior, whose breastplate was apparently too thick for him to pierce; and the dark carbuncles of the sufferer's eyes shone with ferocity such as war only could excite. They struggled half an hour longer under the tumbler, and when I looked again the black soldier had severed the heads of his foes from their bodies, and the still living heads were hanging on either side like ghastly trophies at his saddle-bow, still apparently as firmly fastened as ever; and as he was endeavouring with fearful struggles, being without feelers, and with only the remnant of a leg, and I know not how many wounds, to divest himself of them, which at length, after half an hour more, he accomplished, I raised the glass, and he walked over the window-sill in that crippled state. I never learned which party was victorious, nor the cause of the war."

But there was more individual heroism displayed in that battle than in any human engagement on record. Such heroism and such glory belong to the lower spheres of existence—the satanic spheres. They are corporeal, gnawing and tearing in the lowest; a little higher up they take the form of controversy, equally vicious and unreasonable. The causes of human wars it would be difficult to describe, but they seem in a manner satisfactory to each party, and to be keenly felt. But the end will be something like that of the ant war—the combatants will retire or fall, minus their legs, feelers, heads, and wits; and the conclusion that an impartial reviewer will come to at last will be that there was more passion than reason on both sides, and that it was by their feelers, more than by their understanders, that the heroism was maintained. It looks as if the age of cool understanding had not yet arrived. We are like so many races of white, red, and black ants, and our battles are of about as much rational consequence as theirs.—*The Family Herald.*

FEMALE HEALTH AND EDUCATION.

(Concluded from page 177.)

Turning, now, to mental education, is there here no room for improvement? We well remember an evening visit to a schoolmistress, during which a gentle tap at the door was answered by "come in;" and a child with a book made her appearance. She was hastily retreating at sight of a stranger; but was ordered to remain, and was asked, with terrible emphasis upon the adverb, whether she now knew her lesson? Timidly replying in the affirmative, she handed a thickish octavo volume to the mistress, who apologised for the interruption, and then gave her attention to the task. The pupil was a pretty little girl of ten years old; with bright, intelligent, loving, black eyes, and great black curls bobbing upon her neck. The book seemed to be a chaotic assemblage of questions about nothing particular; and two of these, upon subjects diverse as the poles, the child answered correctly. Then came a momentous inquiry: "In what county of England are cranberries most abundant?" A puzzled and anxious look crept over the little face, the wistful eyes turned up to those of the teacher, but found no clew in their calm repose; and, after a pause, "Africa," was the reply. In another instant the door closed upon the retreating damsel, once more dismissed in disgrace; and our hostess, with a jest at the poor child's stupidity, returned to the subject

which her entrance had broken off. We could not help thinking of the way in which the geographical mistress at that school must have discharged her duties; and of the total non-apprehension of all her teaching displayed in that one answer. The mistress who heard the lesson was not aware, we are sure, that there are two kinds of knowledge of a thing that is taught, the sensation, as distinguished from the meaning, the sound, as distinguished from the idea. She did not know that, in the case of many children, lessons only produce the first; unless explained diligently, carefully, unceasingly, until the crust of mere sense perceptions is broken through, the almost dormant intellect awakened, and mind brought into communion with mind. Without such a process (which some children receive at home from earliest infancy), tasks may be perfectly learned and repeated as sounds alone. The Muchir Achmet Menickley Pasha, commander-in-chief of the Egyptian army, was once, in presence of the writer, wickedly entrapped into a talk upon European politics. By-and-by, Italy was mentioned; and the Pasha, after assenting to much that was said about it, took advantage of a pause to inquire: "What is Italy?" Not where is it; but what? Is it a person or thing, animal or vegetable, fish or fowl? Many young ladies at school, who could repeat, with perfect glibness, a list of the kingdoms of Europe, are not, we suspect, very much wiser than the Egyptian general; and have learned little more than a certain order and succession of sounds, which might as well be in Sanscrit. If dodged or perplexed, they are as likely as not to remember the wrong one; and to say Africa in place of ——shire (the blank modesty expressing our own ignorance of the berry-bearing district). An admirable illustration of the sort of learning is furnished by the Rev. W. H. Brookfield, Her Majesty's Inspector of Schools, in his last published report to the Committee of Council on Education. He copies verbatim the following answers in the Church Catechism, from the slates of two children of eleven years old, and of fair intelligence, who had received instruction at school for five years.

The first answer is:

My duty toads God is to bleed in him to fering and to loaf withold your arts withold my mine withold my sold and with my sernth to whirchp and to give thinks to put my old trast in him to call upon him to onnor his old name and his world and to save him truly all the days of my lifes end.

The second answer is:

My dooty tords my nabers to love him as thyself and to do to all men as I wed thou shalt do and to me to love onnor and suke my farther and mother to onnor and to bay the queen and all that are pet in a forty under her to smit myself to all my gooness, teaches sportial pastures and marsters to oughton mysilf lordly and every to all my betters to hut nobody by would nor deed to be trew in jest in all my deelins to beer no malis nor ated in your arts to kep my ands from pecken and steal my turn from evil speak and lawing and slanders not to civet nor desar othermans goods but to lern laber trewly to git my own leaving and to do my dooty in that state if life and to each it his please God to call men.

We cite these answers, becausc they exhibit a kind of instruction not infrequent in schools for all classcs of society; and depending partly on the natural tendency of the teacher to routine, but much more upon ignorance of thc manner in which the faculties of the mind can be got at and called into play, and of the nccessity that exists for special training in the case of some individuals. We do not believe in grcat stupidity as a common natural gift. Doubtlcss, it sometimes is so; but, as seen among grown-up people, it is often artificial. The bad teachcr complains of the pupil. There is a well-known instance of a girl who, at fifteen, was thought so stupid, that her father despairingly abandoned the attempt to educate her. This girl was Elizabeth Carter, who lived to be, perhaps, the most learned woman that England has ever produced. In boys' schools it is usual to urge that a system must be framed for thc majority, and that study of individual character is impossible; but girls' schools are commonly smaller, and the pupils are far more easily subjected to direct personal influenccs. Their minds might be separately studied by their teacher with very little difficulty; if she only knew the importance of the work, and how to set about it; if she could withdraw her mind from teaching, and could try to realise what is meant by education.

The training of the feelings is a most important point in the management of girls, especially when much exposed, as they often are, to the subtile emotional influence of music. But most teachers are content to express by discipline the external signs of temper and other passions, and then think that they have done enough. Human feelings, however, are highly elastic, and will be sure to re-assert their power when such pressure is removed, and when the events of life call them into activity. This is seldom the case during the first few years after leaving school, often the sunniest period of a girl's existence. But, when this period is past, how many homes are embittered by fretfulness or jealousy! how many illnesses aggravated by peevishness or discontent, for want of knowing how to commence the difficult task of self-control! As this is assuredly one of the first duties of life, so its inculcation should be made the first duty of the schoolmistress; not by wordy lessons, but by gentle precepts—by apt and timely illustration, and by constant example. To supply these, some knowledge of the mind's mechanism is required; but, where knowledge is wanting, its place can only be supplied by the delicate tact of the maternal instinct.

And if Miss Thompson inquires, as she possibly may do, what all this has to do with health, we shall be prepared to answer her. There is nothing so conducive to health as equanimity; and, in a life chequered by the ordinary amount of cares and trials, equanimity can be secured only by habitual control (not suppression) of the feelings, and by habitual and intelligent application of the mind to worthy and dignified pursuits. To procure such habits should be the aim and end of education; any desired kind of learning will be sure to follow in their train; and the power to execute correctly Liszt's wildest sonata, or to repeat backwards all the questions and answers in Miss Mangnall's book, is not to be put in comparison with them.

We have confined our observations to schools for girls; not because we think those for boys are perfect, but because girls suffer most from injurious influences such as we have endeavoured to describe.

PLANTS OF PALESTINE.

The date palm is an example of extraordinary fruitfulness, a single spathe containing twelve thousand male flowers; and its fruit, of which one hundred and fifty to one hundred and sixty pounds' weight are yielded by each tree, forms the chief support of the inhabitants of the barren parts of Arabia and Egypt.

The palm reaches maturity in about thirty years, and continues in full vigour about seventy years longer. It is diœcious; that is, the stamen-bearing flowers (males), and those containing pistils (females), grow on different plants. Plants of this kind are usually fertilised by the pollen being conveyed from one flower to the other by insects, the wind, etc. In the date palm, however, these means often fail, and if unseasonable weather or accident prevent it, the date crops are entirely ruined. To prevent this, the Arabs, who have been acquainted with these facts for ages, gather the clusters of male flowers, and hang them over the pistilline ones, and they even lay up stores of pollen from year to year. In incursions into hostile territories, the invading army often cuts down the stamen-bearing palms, as one of the most severe injuries they can inflict upon their enemy. It is on record, that the threat of doing so, on the part of those attacked, once warded off an invasion. The grand seignior having meditated an invasion of the city and territory of Bassora, the prince of that country prevented it, by giving out that he would destroy all the palms on the first approach of the enemy, and by that means cut off all supply of food from them during the siege. Most of the inhabitants of Persia, Arabia, and Egypt, subsist principally upon its fruit. The harvest of dates is expected, therefore, and attended with as general rejoicing, as the vintage of the south of Europe. The crop sometimes fails, or is destroyed by locusts, and then an universal gloom overspreads the population. "What is the price of dates at Mecca or Medina?" is always the first question asked by a Bedouin who meets a traveller on the road.

That the date palm was anciently very

plentiful in Palestine we have abundant proof; ancient writers bear testimony to it, and on the medals of no less than four Roman emperors, Vespasian, Titus, Domitian, and Trajan, it is employed as an emblem of the Hebrew nation, or portions of it; and the palm tree in Judæa does still mournfully typify the desolate condition of the Hebrew people. It was prosperous in their prosperous days, and has become desolate with their desolation. Palestine is not now the country of the palm; Jericho, anciently called "the city of palm trees," has but few comparatively around it; and scattered over the land, two or three palm trees are rarely seen together. Branches of the palm were anciently used as symbols of victory and triumph, both among Jews and Gentiles. Thus, when our Lord rode in triumph into Jerusalem, the people "took branches of palm trees, and went forth to meet him, and cried, Hosanna!" etc., John xii, 13. So, also, the redeemed in heaven, in token of their ascribing victory to Him who conquered sin and death, are represented as standing "before the Lamb, clothed with white robes and palms in their hands."

But we must hasten to notice some others. The fields of Palestine are often studded in the autumn with the *Amaryllis lutea*, a beautiful plant of the lily tribe, resembling our crocus, but larger. It sometimes covers whole acres of ground with its brilliant flowers in September and October, and is supposed to be the plant alluded to by our Saviour, when he bade his disciples "consider the lilies of the field, how they grow; they toil not, neither do they spin: and yet I say unto you, That even Solomon in all his glory was not arrayed like one of these," Matt. vi, 28, 29. Many other liliaceous plants, of varied form and beautiful colours, adorn the plains of Palestine and other tropical countries, often abundant as the buttercups and wild flowers of the meadows of our native land. A singular plant, called the rose of Jericho *(anastatica hierochuntina)*, a plant of the cruciform order, is a native of Palestine, Syria, and Arabia. When full-grown it contracts its rigid branches into a ball, which is easily withdrawn from the sand by the wind, and hurried from place to place. But as soon as it is exposed to water the branches relax and spread flat, as if its life were renewed, and this will take place after the plant has been many years dried up. Some superstitious tales are told of it, among which it is said to have bloomed on Christmas-eve, to salute the birth of the Redeemer, and to have paid homage to his resurrection by remaining expanded till Easter.

The cedar of Lebanon is peculiar to Palestine, having been found nowhere but on the mountain whose name it bears. The cedars are now but few in number. It is, however, generally considered that the "cedar" so often mentioned in Scripture, was not the tree we now understand by that name, as its timber is comparatively valueless, and has but little fragrance. It was, doubtless, some coniferous tree, most probably the *juniperus oxycedrus*. Theophrastus describes a species of juniper as bearing the name of "cedar," being peculiar to Syria and Phœnicia, and used for nautical purposes, thus agreeing with Ezek. xxvii, 5, "They have taken cedars from Lebanon to make masts for thee." Various trees of this kind inhabit Palestine, some of which afford excellent timber; among others, the Scotch fir *(pinus sylvestris)*, and it is believed *pinus laricio*, *p. halepensis*, and *p. orientalis* also.

Another remarkable tree is the olive, which gives its name to Mount Olivet. It is truly an interesting and curious fact, that during a period of little less than three thousand years, Hebrews, Assyrians, Romans, Moslems, and Christians, have been successively in possession of the rocky mountains of Palestine; yet the olive still vindicates its paternal soil, and it is found at this day upon the same spot which was called by the Hebrew writers the Mount of Olives, 1100 years before the Christian era. The wood of the olive is beautifully veined, it takes a high polish, and having an agreeable smell, is much esteemed for ornamental work. The appearance of the tree is not unlike that of our willows, but the fruit, which is its chief value, is like a damson to the eye, with a soft oily pulp, and a hard stone in the centre. From this fruit the oil is procured by

expression, the pulp having been first ground in a mill. The best oil is obtained from Italy, Sicily, and Provence, and throughout the southern countries of Europe it is very extensively used, being employed as generally and in the same way as butter and cream are with us. The quantity imported into this country in 1848 was 2,518,740 gallons.

There was anciently an enormous consumption of it in Palestine; it was used, doubtless, as it still is in southern Europe; it was also used in the temple for the lamps, which were kept burning continually (Exod. xxvii, 20). Great, however, as was the consumption, the produce was so abundant as to leave a considerable quantity for exportation. Solomon gave 20,000 baths (150,000 gallons) of oil yearly to the Tyrian hewers of timber in Lebanon (2 Chron. ii, 10), and, as it would appear, an equal quantity to the king of Tyre himself (1 Kings v, 11). It appears, too, that the Jews traded with their oil in the great mart of Tyre (Ezek. xxvii, 17), and sent it to Egypt (Hosea xii, 6). To this day, the olives and olive oil of Palestine are equal to any in the Levant. Branches of the olive tree were used as one of the materials of the booths at the feast of tabenacles (Neh. viii, 15); and an olive branch has long been considered the symbol of peace. The dove which Noah sent forth on the abating of the waters of the deluge, returned with an olive leaf plucked off; the hardiness and tenacity of life of this tree, probably enabling it to withstand so long an immersion in the waters of the flood. The olive is now cultivated and naturalised over all the south of Europe, but it appears to have originally come from Asia, and grows wild abundantly about Aleppo and Lebanon. Its longevity is great. Some plantations of it in Italy, as at Terne, are supposed to have existed from the time of Pliny; and in Judæa and Galilee, clumps of several thousand olive trees frequently occur, which are, doubtless, the remains of ancient plantations.

But we must hasten to mention a few other plants of Palestine. It is an interesting country in its flora, and deeply so in its associations. The cypress grows there, and appears to be the "gopher wood of which the ark was built (Gen. vi, 14.) Some species of acacia are also found; the wood of one of which *(acacia horrida)*, a thorny tree, seems to have been the "shittim" wood used in constructing the ark of the testimony, the altar of burnt offering, the boards of the tabernacles, etc. (Exod. xxv—xxvii), and deserves the name given to it by the Greek translators, meaning "wood that never decays." The pomegranate is, and was, very common in Palestine and Syria. It was one of the productions which Moses especially distinguished in his address to the Israelites, as characterising the rich fertility of the land. The fruit was also one of the three kinds which the spies brought as favourable specimens of the produce of the country. The flowers and fruit are both very beautiful; the latter is about the size of an orange, very juicy, and of an agreeably acid taste. It is still very highly esteemed; it is eaten fresh, and its juice is used as an ingredient in the favourite and delicious sherbets, of which the orientals are so fond. It is repeatedly alluded to in Scripture. It is specified by the Israelites, while murmuring at Moses, as one of the greatest luxuries they enjoyed in Egypt (Num. xx, 5). In Solomon's Song it is mentioned as one of the most valued plants (chap. iv, 13); and imitations of the fruit were among the chief ornaments of the temple.

The oak *(quercus robur)* is frequently found in Palestine; but the tree mentioned in Scripture under that name is generally considered to be the terebinth tree *(pistachia terebinthus)*. It yields a resinous substance, as do several allied species. The produce of the terebinth is called Scio or Cyprus turpentine; gum mastic is the produce of *pistachia lentiscus;* and the pistachio nuts are the fruit of *p. vera.* It was under a terebinth tree that Abraham entertained the angels (Gen. xviii); and under a similar one in Shechem Jacob buried the idols brought by his people from Mesopotamia (Gen. xxxv, 4). It abounds near Jerusalem.

The carob tree *(ceratonia siliqua)* is plentiful in Palestine, as also throughout the south of Europe. It is a tree from thirty to fifty feet high, with small bunches

of red flowers, and is cultivated for the sake of its pods, which contain a dry pulp, in which the seeds are imbedded. This pulp is very nutritious, and is supposed by some to have been the food of John the Baptist in the wilderness, whence it is called "Locust tree," and "St. John's bread." It is also supposed to be the "husks that the swine did eat," spoken of in the parable of the prodigal son (Luke xv, 16). It is still used in Palestine for feeding swine, and in Spain for horses.

But we must not leave Palestine without noticing the myrtle, which is so often found in the vales, among the "eternal hills," where all is so calm and tranquil, that, says Dr. Kitto, it naturally becomes associated in the mind with everything that is lovely and peaceful. It offered a choice emblem of peace and quietude, and gave a lively freshness to the annunciation of the angel, as he stood among the myrtle trees, "We have walked to and fro through the earth, and behold all the earth sitteth still, and is at rest." (Zech. i, 11.) One variety is called the Jew's myrtle, and has its leaves in threes at each joint. It is still in much request among them, and yearly do they observe the feast of tabernacles, though they cannot do it as once they did, when Ezra exhorted them, in conformity with the Mosaic ritual, to "go forth unto the mount, and fetch olive branches, and pine branches, and myrtle branches, and palm branches, and branches of thick trees, to make booths, as it is written," Neh. viii, 15. The myrtle here referred to is the common myrtle, which was then, and is still, very abundant in Judæa. The beauty, loveliness, and fragrance of the myrtle, are striking emblems of the moral paradise which is destined to be produced, when the gospel shall be universally diffused and obeyed, and of the dispositions it implants in the hearts of those who yield to its influence. "I will plant in the wilderness the cedar, the shittah tree, and the myrtle, and the oil tree," Isa. xli, 19; and again, "Instead of the thorn shall come up the fir tree, and instead of the brier shall come up the myrtle tree: and it shall be to the Lord for a name, for an everlasting sign that shall not be cut off," Isaiah lv, 13. Among the Arabs the myrtle is considered to rival the violet; and they have a tradition that "Adam fell down from paradise with three things—the myrtle, which is the chief of sweet-scented flowers in this world; an ear of wheat, which is the chief of all kinds of food in this world; and pressed dates, which are the chief of the fruits of this world."

PLANTS IN SLEEPING-ROOMS.

THERE are two distinct and apparently opposite processes going on in the plant: 1. The decomposition of carbonic acid—the fixation of the carbon for the purpose of building up its own tissues—and the liberation of the oxygen. This constitutes vegetable nutrition. 2. The exhaling carbonic acid, the result of the union of the oxygen of the atmosphere with the carbon of the vegetable tissues. This is analogous to respiration. The first of these processes is not only beneficial to animal life, but absolutely essential to its existence; for, as the animal inhales oxygen and exhales carbonic acid in the process of respiration, if some agency did not work out the reverse change, the whole of the oxygen in the atmosphere would be used up in a certain length of time (800,000 years according to Professor Dumas), and animal life consequently disappear. But, as it is, animals and plants are thus mutually dependent upon each other; and this is the case not merely with regard to carbonic acid, but also some other compounds, such as ammonia, water, &c., which are formed in animals and decomposed in plants. So far, then, it is healthy to have plants in rooms. But there is the second process—a kind of decay, or by some looked upon as true respiration; and as this is precisely what occurs in animals, it must, of course, add to the carbonic acid of the atmosphere, and thus produce an effect prejudicial to animal life. If both these processes were carried on to the same extent, the one would, as a matter of course, counteract the other, and neither would produce either good or evil as to its effects upon the atmosphere. But as the former, under general circumstances, preponderates excessively over the latter, it is on the whole healthy to live amongst plants.

There are circumstances, however, in which the respiratory process is active, and the nutritive at a stand-still, and here the influence of the vegetable upon the atmosphere will be injurious to animal life. One of these circumstances is the absence of sunshine, or daylight (as these stimuli are necessary to the carrying on the process of nutrition in the plant). It is therefore injurious, more or less, to sleep in a room in which there are plants.

THE SHEFFIELD SOIREE.

This entertainment is to take place in the Cutlers' Hall on Wednesday evening, Nov. 19, when Dr. Coffin, and other gentlemen, will be present, and address the meeting. The special object of this soirée is to raise funds for building "an Hospital for the Cure of Consumption, more particularly, under the Botanic System as introduced into this country by Dr. Coffin. To be connected with the Hospital, a Medical School, where parties can be educated in all the branches of medical science, which would give greater confidence to the public at large. In the name of human brotherhood and suffering humanity we call upon you for your support and patronage in this noble and God-like work."

To this subject, the attention of the readers of this Journal has been frequently directed. No doubt if such an institution were in existence, and its management in the hands of active and judicious governors, it would prove not only a great blessing to many of the suffering sons and daughters of mankind, but it would also be an efficient school for teaching the principles of Medical Botany, and a very powerful means for giving those principles the widest possible diffusion. There has very recently been a very interesting soirée in the same hall in connection with the policy-holders of one of the most flourishing life assurance offices in London. It is hoped that the people of Sheffield will display the same interest in preserving life as they have shown in providing for their families after their death.

Simple and unmingled good is not in our power, but we may generally escape a greater evil by suffering a less.—*Dr. Johnson.*

Theories of Digestion.—Hippocrates ascribed the digestion of food to a sort of putrefaction. Galen to the heat of the stomach, which ripened and softened the food, like the sun does the fruits. Pringle thought it was fermentation. Haller said it was macerated, or pounded in the stomach. Borelli and Keil thought the stomach ground it by its muscular action. Cheselden was the first to hint at the existence of a solvent juice; and the experiments of Reaumur, Stevens and Spallanzani proved this to be the truth.

The Action of Light upon the Growth of the Roots of Plants.—The action of light upon the growth of the leaves and stems of plants, and the attraction of the leaves towards it, is well known. That flowers, leaves, and stem turn to the light, is seen by any who keep plants in a window. The action of light, however, upon the roots is less known, although it is an equally important subject. Hitherto, the tendency of the roots to grow downwards has been attributed to the influence of gravitation, the attraction of the ground from which the roots derive their nourishment; but light produces a still greater influence. The roots shun the light in the same proportion as the stems seek it. Experiments have proved this most satisfactorily. A deep box was taken, thoroughly impervious to light, and upon a wire grating at the upper end of the inside, peas and cress-seed were sown in wet moss. At the lower end of the box a small hole was made, through which the sunlight was thrown by means of a reflector placed underneath. As the seeds began to vegetate, the roots grew upwards, and the leaves downwards, towards the light.

NOTICE.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury branch.

Dr. Coffin's "Treatise on the Diseases of the Generative Organs," will be published on Wednesday, the 19th inst. Price 2*s.* 6*d.* Post-free, 2*s.* 8*d.*

NOTICES TO CORRESPONDENTS.

All letters should be addressed "To the Editor of the Botanical Journal," 134, High Holborn.

Post-office Orders and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S

BOTANICAL JOURNAL

AND

MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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ADVERTISING PUFFERY IN VIOLATION OF ALL SCIENCE.

It is very amusing to read the numerous advertisements of patent medicines which appear in all periodicals and journals, whether metropolitan or provincial. The success of Morison by advertisements has encouraged a Holloway to try the same means; and the success of Holloway has brought many others to make a bold adventure in the quackery department. It is remarkable that every empiric tries to persuade the public that his nostrum will cure *all* diseases, in *all* climates, at *all* ages, and of both sexes; in one word, *his medicine* is to be the *panacea* for the ills to which flesh is heir. Nothing can be a more flagrant outrage on science than some of these advertisements, and the pretensions they set forth. The causes of disease—the date of its commencement—the physical idiosyncracy of the patient, and the peculiarities of each sex, are all treated with indifference, and yet any one of these considerations would materially influence the scientific adviser in determining the course to be pursued. When it is known that it has been found by analysis, that some of the "patent medicines" contain ingredients most damaging to human life, it becomes the public to be upon their guard how they are led away by puffing advertisements, lest it should be with many more as it was with a gentleman who had been suffering from occasional attacks of erysipelas, and was persuaded to use a quack medicine. He was certainly cured of the complaint, but he has been a confirmed invalid ever since, his digestive organs having received an injury from which, in all probability, they will never recover. His own remark upon the subject was, "I think it" (the quack medicine) "cured me of the erysipelas, but it has almost killed me in the curing." Only a short time ago we were called to see a lady, who, to all appearance, was rapidly sinking from excessive diarrhœa, and scarcely able to speak herself. Her husband informed us that she had enjoyed uninterrupted health, with the exception of an occasional headache; she was recommended to take "—— pills," and these pills had so affected her constitution that she had not been well since. In the Botanic Medicine these consequences must be avoided, as there is not a single herb in the whole of the materia medica of the Botanic System which can be injurious to the most delicate or the youngest constitution. And we confidently challenge the most skilful analyst to investigate and scrutinise all the preparations of Dr. Coffin, fully assured that no ingredient injurious to the human constitution will ever be detected. We have advisedly used the word "preparations," because there are scarcely any manufactured medicines—all are grown, and not made, as the herbs require only to be carefully selected, prepared and combined.

We had intended to continue these observations to a much greater length, and should have proceeded, had we not met with the accompanying article, which will form a good sequel to the foregoing remarks. We refer to

THE SCIENCE OF PUFFERY.

How did the civilised world ever get on without advertisements? What did the

Greeks, for instance, do in the way of puffery? Had they their particoloured chariots, like our advertising vans, notifying in monstrous letters that the Athenian youth might find a superfine chlamys of the true saffron dye, or a peplum of first-rate stuff and pattern, at the stall of such and such a classic Moses in the Agora? Did a Bœotian Mary Wedlake ask them in her native Doric if they bruised their oats yet? or did a young practitioner of Cos, fresh from the hands of the Æsculapiadæ and the Egyptian schools, engage to cure all known diseases by means of his Morison's pill or Holloway's ointment? Did the Roman ladies rnsh to "ruinous sacrifices" paraded in tall black letters, and buy there for a *coa vestis*—the renowned transparent silk robe from Cos—some make-up article woven close to the Flaminian-gate? How did they know which Latin Truefit to choose for the building up of their wonderful pyramids of frizzled hair? And when their crocus oil unguentum was out, had they a Roman Rowland and Son, with lace-work label and pretorian stamp, telling them in Ciceronian periods that his unguentum was *the* unguentum, and that every Roman lady who used the same was sure of "myrrh-coloured" hair in Junonic abundance to the end of the Greek Kalends? How did the Venetian merchant princes make known the arrival of their Eastern cargoes? Did they man eccentric-looking gondolas, plastered over with hieroglyphics, meant to proclaim that on such a day this week Damascus steel and Byzantium silks were to be had for a due proportion of sequins under the pillars of their grand "Royal Exchange" in the Piazza San Marco? Did they send out varlets quaintly dressed, to tell in soft Venetian of wonderful chiropodists, and miracle-working doctors, as you meet with now in the streets and places of Paris?—for of all the realms of puffery Paris is the Empyrean. And the Goths, and the Huns, and the Danes, and the Picts, how did they manage? And ourselves in Queen Elizabeth's time? How did we know where to go for our manchets, when not made at home—for our mulberry-coloured suits, our peaked shoes, our starched ruffs, and our sack and malmsey? It must have been very strange, this living in a non-advertising age. One wonders how consumers and producers came together at all, unless it were by a kind of commercial mesmerism, or by that instinct which leads most animals to their proper pasture-ground.

But if we lived once without advertising, we are making up for lost time now, in a way that of itself would show we wrote letters by electric telegraph, and walked from place to place by steam. There is something almost heroic in the extent and manner of our advertisements; certainly there is something scientific. It is an art, a science, a mystery of itself: it has its hierophants and its professors, its neophytes and its aspirants, like any other great mystery of knowledge; and we of the outside world can but marvel and believe—and believing, BUY, in all the reverent faith of the uninitiated and the unenlightened. Yet a few bold and free-thinking spirits dare, every now and then, to examine into even this great arcanum of trade, and to protest against the infallibility of advertisements—like commercial Luthers disputing the power of commercial synods. These Luthers are generally on this side of the counter—buyers, not sellers. In the first place, they ask themselves where all the money comes from which is represented by the gigantic plate-glass windows—the ormoulu candelabra, the elegant lamps, the mahogany counters, the mere externals and non-remunerative signs of traffic? And who, in reality, pays for the fast-trotting mare in that popular but hideous Noah's Ark of advertising monstrosity? Who clothes and feeds the "animated sandwiches" parading in melancholy file a back and front view of some incomparable hat not worth the trouble of taking home, or exalting the immortal virtues of chairs and tables, found on trial to be endowed with the property of speedy dissolution? Who is the real advertiser in the papers, the shopman or the customer? further asks the commercial Luther, pondering on the unrecognised value of Cocker. Who flings his ten thousand a year broadcast in public announcements? The producer swears it is he; the consumer knows there are no Curtiuses in trade—ergo, it is he. And the consumer is right.

Two facts concerning trade are going on together side by side. The enormous sums spent on advertisements, in which term we include all the outside flash and show which are employed as advertisements by the shopkeepers themselves, and the great and increasing rage for "cheapness" in every branch of trade—two divergent lines most difficult to reconcile with any given point of national prosperity, apparently impossible to bring together in one focus of commercial stability. It is plain that some one must pay the difference between remunerative prices with small advertising expenses, and low profits with immense advertising expenses. There is certainly something in the trade nostrum met with everywhere, of the value of "small profits and quick returns;" but that does not explain away all the difficulty. It helps, but it does not complete. Who is it, then, who pays? It is the consumer for one. He pays, not in actual excessive cash laid down for a certain article, but in the worthlessness of that article, whose cheapness tempted him, and whose cheapness will ruin him. It would have been better economy to have bought something dearer and better made, which, by lasting longer, would have cost less in the end. And the workman pays for another. More competition, lower wages, longer hours—this is the tripod on which blazes that fatal *ignis fatuus* of greater cheapness which lures so many into the pathless marshes of expense and debt. It is not pleasant to know that such a ghastly tripod stands beneath the counters of the gay West-end shops, which look as if they had been built and stocked by some Arabian Nights' magician, for the exhaustless wealth displayed in their contents and their appointments. It is not animating when one has bought what one considers a first-rate bargain, to be reminded by some terrible tragedy in the police reports that the workman who manufactured that very article was underpaid, so underpaid that he could not live honestly by his labour; and that most part of the gilt and the lacker, and the mahogany and the plate-glass, and the "spirited advertisements," and even the salary of the paid puffer, is fashioned from the earnings at which the excess of labour supply over labour demand induces the operative to clutch with eagerness. Yet the two circumstances we have noted, namely, the increasing cheapness of manufactured articles, and the increasing expenditure on advertisements—which distinguish modern metropolitan commerce from any past period of trade, owe their existence solely to low wages and worthlessness or adulteration of manufactures and productions. So that the Athenian was better off with his open stalls in the market-place, than we with our palatial shops down our streets. He had no poetic catalogues of the virtues of such an one's chitons and cothurni flung into his chariot as he drove through the gates, nor was stopped in his rambles by the Parthenon and the Acropolis by dirty little Greeks thrusting dirty scraps of writing into his hand—as is the intolerable nuisance of our present custom through the streets of London. After all, with all our belief in the progress of humanity, there were some things better than in the present. Among them, not the least, the absence—so far as we know—of puffery and obtrusive advertisements, which, from the useful and modest announcements that they were in the beginning, have grown now into a monstrous and disproportionate nuisance, which is harmful as well as disagreeable.—*Daily News*.

HOW LONDON IS FED AND WHAT IT DRINKS.

The most marvellous events would fail to excite our wonder if they were not of rare occurrence. The first emotions of surprise are the most powerful: the cause that excited them loses its force by repetition, and the mind accommodates itself easily to any circumstances however grand or striking, if they be but common. That which would be a miracle if it occurred but once, is witnessed daily without astonishment, and almost without feeling. It is a curious property of the human mind that an isolated exhibition of power should be thus capable of exciting its deepest springs, whilst the continued outflowing of the same power scarcely ruffles its surface. The grand operations of nature are going on around us every

day in silent majesty, yet we scarcely pause to observe them; and few of us ever consider their admirable adaptation one to another—how these great agencies meet the wants of millions, complete their industry, and give consequences and results to their skill. No—it has always been so: we never ask why! We never dread a failure or break in the mighty chain of events. We give ourselves up to the current of things—never rising above them to contemplate either their cause, their course, or their termination.

Nor is it alone in the contemplation of natural phenomena that we are prone to fall into this listless take-it-as-it-comes habit of mind: the discoveries of science and the achievements of art are admired only when they are unique: their multiplication sinks them into mere articles of purchase and sale. So it is also with the great social laws by which human beings are held together in large communities, supplied with all necessaries, and protected from dangers incident to the aggregation of multitudes in one limited area. What, for example, can be more astonishing than the manner in which London is fed, and all its varied wants supplied? Let the reader endeavour to form an adequate conception of what is meant by London, and this can be done by comparison only. The population of the gigantic metropolis is now nearly three millions of souls. These words are easily pronounced, but the numbers they indicate altogether elude the grasp of the human intellect. Imagine all the people of Scotland collected together on a space of some eighty square miles—or the entire population of Hanover, of Wurtemburg, or of Norway and Sweden—and you may have some idea of the vast and dense multitudes which are crushed together in the metropolis.

To sustain this mighty congregation of human beings, every region of the Earth is placed under contribution. Live cattle come from Scotland, Wales, Ireland, Denmark, and Holland. Fresh-killed meat is sent from most of the northern counties. Bacon and salt meat come from Ireland. Hams from Spain, Germany, and Yorkshire. Game from all the sporting counties of the North. Rabbits from the southern counties, and from Ostend. Poultry from half the counties of England. Eggs from Ireland and France. Fish from all the four Seas, and most of the rivers of the three kingdoms. Bread-corn comes from Odessa, Toganrog, Galatz, Dantzic, and the Mississipi states of America, as a supplement to our home supplies. Cheese comes from more than a dozen English counties, and from Holland and America. Butter from Ireland and America. Milk is fetched from long distances by railway; and vegetables are supplied by a broad belt of market gardens around the metropolis, and also from many foreign countries, and distant counties of England.

We draw upon China for our tea; and upon Ceylon, Arabia, Brazil, and the West Indies for our coffee. Our cocoa comes from South America and the West Indies; and the sugar to sweeten these beverages is imported from the East and West Indies, from Brazil, and other intertropical countries. France, Italy, Spain, Portugal, Germany, and Hungary, send us wines and brandies—the West Indies rum—and Scotland and Ireland whiskey. Our salt comes to us from a distance of one hundred and fifty miles; and our spices and condiments traverse one half the circumference of the globe.

An excessive supply of these various commodities, even for a few days, would cause immense waste; whilst a deficiency would be followed by inconceivable suffering, and even by death, in its most appalling form, to hundreds of thousands. Is there not, then, something truly wonderful in the steady balance of the supply and demand, and in the manner in which the necessaries of life are distributed amongst such immense numbers, so that not one is left destitute of his portion—unless it be by some exceptional cause which immediately attracts attention and awakens sympathy? The rare occurrence of such cases proves, in a striking and forcible manner, the general regularity of the supply and the equability of its distribution. One thousand millions of rations are required each day by the population of London; and every one of these is delivered and received by the proper persons without mistake or confusion; yet this admirably harmonious system

works spontaneously without any commissariat department, without governmental officers or boards to look after it. Happy is it for the millions of London that what is called human wisdom is not charged with the task of supplying their necessities: it is a task before which the highest powers of statesmanship would be feeble as infancy, and the science of political economy—a "dismal science" indeed! What if it were to be fulfilled by that noted character, General Routine! What an awful Balaclava would the old offender make of the great metropolis in a few days! What nameless horrors would mark his administration!

If we turn from the contemplation of the variety which characterises the supply, and attempt to estimate its amount, we are utterly baffled by the magnitude of its numbers and quantities. The *Quarterly Review*, No. CXC, attempts to impress the mind with both by a pictorial representation. Fixing upon Hyde Park as his stand-point, the reviewer imagines all the barrels of beer consumed annually in London piled together, forming a thousand columns of a mile in perpendicular height; and from the top of this tower, he looks down upon the never-ceasing stream of all things edible which flows into London from every quarter of the horizon.

The first picture in his panorama is enough to appal the most stouthearted vegetarian, and to make him almost despair of ever converting the voracious capital from its carnivorous propensities. A vast procession is before him; in front of which marches a mighty herd of oxen, ten abreast, and seventy-two miles in length. The head of the column is in London, but its rear is considerably beyond Peterborough. Next comes a bleating flock of sheep, ten abreast, a hundred and twenty-one miles in length, reaching all the way from Bristol to London. Whilst Piccadilly, Regent Street, the Strand, Fleet Street, Cheapside, far eastward on the Mile-end Road, stretches a line of calves, seven miles and a half in length, and still ten abreast; and by its side a column of swine, of equal depth, and nine miles long. As the reviewer watches the march of these mighty, lowing, bleating, roaring and grunting hosts, the air becomes suddenly dark, a black pall seems drawn over the sky; it is the great flock of birds, poultry, game, and wild fowl, which, like Mrs. Bond's ducks, are coming to be killed. As they fly wing to wing, and tail to beak, they form a square of fifty-one acres—equal to the whole of St. James's Park. And no sooner has this prodigious flight passed, than the whole of Hyde Park, from the Marble Arch to the round pond in Kensington Gardens, is inundated with hares and rabbits, two thousand abreast and a full mile in extent.

Here is matter to shake the resolution of the most zealous vegetarian—not to speak of the hams, the venison, the potted meats, or of the mountains of oysters, and inconceivable multitudes of fish of every variety, all tending by railway, by smack, by steamer, by every possible conveyance to the same insatiable, all-devouring vortex. Let not our esteemed friends the vegetarians despair, however; there is still comfort for them; they need not starve for lack of their favourite diet; there will be plenty for them and for all the converts they may make for the next century. The markets supply London annually with 138,000 tons of potatoes, 80,000 tons of cabbages, 43,000 tons of turnips, 37,000 of onions, 32,000 of brocoli, with carrots, peas, cucumbers, rhubarb, lettuces, beans, celery, radishes, Spanish onions, vegetable marrow, asparagus, and herbs, amounting on the whole to three hundred and sixty-one thousand tons' weight. As for the bread, the good white bread eaten in London in one year, it is something prodigious and incalculable. A vague idea may be formed of its quantity by imagining all the half-quartern loaves built up together in a rectangular pyramid; its base would measure two hundred square yards, and its apex would rise into the air to the height of 1293 feet, or nearly three times the height of St. Paul's.

London consumes annually 80,000,000 of quarts of milk, in the production of which twenty-four thousand milch-cows are constantly employed; and for which the consumers pay £1,600,000. Above three million quarts of this milk come up from the country by railway—chiefly from the Eastern Counties. The cow,

we perceive, performs an important part in the economy of the metropolis, even in the article of milk; but its importance is quite as great in the articles manufactured from milk. It requires one hundred and sixty thousand cows to supply London with butter; of which we use annually some 30,000,000 lbs. to lubricate the harder articles of diet: to this we must add some eight million pounds of cheese and a vast quantity of veal and dairy-fed pork, in order to understand our obligations to poor "crummie."

The number of eggs eaten in London is perfectly fabulous. It is supposed that 1,500 millions of eggs are eaten annually in the United Kingdom; of which, at least one fifth, or three hundred millions, falls to the share of London. The manner in which this prodigious supply is kept up is full of wonder and interest. The departments of France nearest to the Channel are visited by dealers, who purchase all that the country people have to sell; and it is said that there is, at Bastoign, a farm of two hundred acres maintained solely for the supply of eggs to the London market. Vessels take in cargoes of eggs at most of the ports between Cherbourg and Calais; the whole number being estimated at the enormous figure of one hundred millions. The egg-produce of France is estimated at eight hundred millions annually—enough to form a string of beads that would coil twice round the globe. In Ireland, the eggs are collected from the cottiers by *runners*—boys from nine years old and upwards; each of whom has a regular beat embracing a range of some fifteen miles, over which he goes every day. The price paid the cottiers is from 2s. 6d. to 5s. per six score; the runner's share being a penny for every ten sound eggs. The dealers in the towns receive them from the runners, pack them with straw in crates containing 10,000 each, and send them on to England. The number of eggs furnished yearly by Ireland is 500 millions, worth about £1,000,000 sterling.

The quantity of game devoured in London annually—including rabbits, hares, larks, partridges, snipes, pheasants, wild ducks, grouse, plovers, woodcocks, widgeons, and teal, amounts to one million eight hundred and fifty-two thousand head—to which must be added forty thousand stone of venison, and seventeen thousand quails, which are all sent from Rome. Besides these delicacies, the metropolis eats three million seven hundred and forty eight thousand head of poultry, including geese, ducks, fowls, turkeys, and pigeons.

The contributions of the rivers and seas to the insatiable appetite of this *edax omnium* is stupendous. Counting salmon, cod, haddock, soles, mackerel, herrings, eels, whiting, plaice, turbot, brill, mullet, oysters, crabs, lobsters, prawns, and shrimps, but leaving out sprats and white bait, we, such as you see us, manage to eat every year 3000 millions of fish, weighing 230,000 tons; for which we pay about two millions sterling.

Turning once more from the animal to the vegetable world, we find that the supply of fruit required by the metropolis is by no means unimportant. We consume annually 46,000 tons of apples, pears, plums, gooseberries, currants, damsons, cherries, strawberries, filberts, hazelnuts, mulberries, and raspberries, for which we pay three millions sterling. These fruits are chiefly of home growth; but many foreign countries also contribute their rich productions. The West Indian pine, which in former years was a luxury attainable by the Luculluses only, is now sold by pennyworths in the streets of London. And the orange trade has attained an importance which few would suspect: it employs about two hundred smart clipper-built schooners, which, during the winter and spring, arrive below London Bridge from Spain, Portugal, the Azores, the Madeiras, Malta, and Crete. About three hundred millions of oranges are imported annually, of which, one-third, or a hundred millions, are sucked in London. We have, also, immense quantities of lemons from these countries; besides grapes, chestnuts, and citrons; and of foreign nuts alone, the metropolis cracks yearly a million and a half of bushels.

Pass we now to the contemplation of the beverages with which all these good things are washed down, and new scenes

of wonder rise before us! The quantity of tea imported into the United Kingdom in 1854 was 62 million pounds, which gives an average of two pounds a head to the whole population. We shall not be far wrong, however, if we calculate the quantity used in London at six pounds per head, since a very large portion of the population of Ireland and Scotland, as well as of the English counties, drink no tea. This will give 15 million pounds as the amount consumed by the metropolis. For the satisfaction of those of our readers who love "the cup that cheers but not inebriates," we are happy to be able to inform them, on the authority of *The Lancet*, that black tea is but little adulterated. We are not, however, in the same position as regards green tea, which, according to the same high authority, is extensively sophisticated with various worthless, and some injurious substances. Of coffee the metropolis absorbs about nine million pounds annually, but this is extensively mixed with chicory, and being so mixed it meets with a much readier sale than when pure. Cocoa and chocolate are produced by the same tree in the West Indies. Our consumption of both is about $1\frac{1}{4}$ million pounds per annum. The essential principle of these three substances is identical. In tea it is called *theine*, in coffee *caffeine*, and in cocoa *theobroma*. Its effect upon the constitution is to prevent the waste of tissues, and thus to render less food necessary for their reparation.

The sugar to sweeten the foregoing drinks forms no unimportant item in metropolitan housekeeping. It may be set down at about 200 million pounds per annum; but, unfortunately, the coarser kinds which are chiefly used by the poor are much adulterated. Our space will not permit us to say anything of the pepper, the ginger, nutmegs, allspice or pimento, cinnamon or cloves, which titillate the palate of the capital. Neither can we notice the rice, the sago, the tapioca, or the other curious farinaceous substances of which it makes its puddings, farther than to say that they are all used in immense quantities.

Of tobacco—*horrescimus referentes*, pardon us, Mr. Reynolds, we only name it in the discharge of editorial duty—we use annually more than five million pounds, for which we pay one million sterling. Mr. Reynolds and the Anti-fuliginous Society may, however, laugh in their sleeves when they see young gentlemen with mustaches smoking what they believe to be Havannas, Mexicans, Regalias, Lopez, Cubas, Principes, Bengals, Fragancias, or Queens, for we have to tell the Society, in its ear, that most of these are made out of cabbage in Whitechapel.

A word or two on beer before we close this article. It is calculated that London brews about two million barrels of beer annually. One of the great breweries sends out 50,000 gallons every day. In this establishment there are five boilers, each of which will contain 12,000 gallons —and nearly two hundred store vats; some of which will hold 100,000 gallons. The store of beer in spring is about four million gallons, enough to float the Duke of Wellington.

The subject we have thus glanced at is one of profound interest. By what mysterious agency is the whole carried on without system or agreement beforehand? We see how perfect must be the division of labour, how complete the correspondence between the multitudinous parties, how admirably timed the preparations and the transmissions; how thoroughly successful is the operation of the complicated machinery by which nearly three millions of persons are sustained from the very ends of the earth! The primary agent and motive power by which these marvellous effects are produced, is human necessity conjoined with the power we each possess of supplying one another's wants. This it is that forms the very cement of society, that more or less unites mankind throughout the earth in a common and mutual dependency. It is this that regulates that wonderful system of exchanges, by which the products of one land are bartered for those of every other, so that whilst the wild savage of the woods sends his sables to adorn the beauties of civilisation, he receives in return the blanket and rifle which have been produced by the highest exercise and most ingenious processes of human skill.

We cannot conclude without stating that the information we have thus laid before our readers, is derived from Mr. Dodd's valuable work on the *Food of London*—a book which we would strongly recommend to our readers. It is full of information, conveyed in a pleasant style, and may be had at Longman's for, we believe, 10*s.* 6*d.*—*The Metropolitan.*

MEDICO-BOTANIC SOIREE.

About four hundred of the admirers of the Coffin system met together on Wednesday, the 19th instant, at a soirée in the Cutlers' Hall. There was an excellent tea provided, an abundance of vocal talent, and a most energetic band, who discoursed powerfully from the orchestra some popular airs. Tea being over, Mr. Councillor Harvey was called to the chair.

The Chairman opened the proceedings in a brief address, expressing his own belief in the Medico-botanic system, and stating that he was always ready to support any movement for the elevation or moral or intellectual improvement of the people. (Applause.)

Mr. Woodcock moved the first resolution:—"That observation and experience have taught us that the regular practice of medicine is absolutely imperfect and highly dangerous, and that whilst we feel convinced that the vegetable or reformed system of practice is eminently superior and better adapted to the requirements of the people, it is the opinion of this meeting that any exclusive privilege in the practice of medicine is detrimental to the best interest of society, and none more so than that connected with the old system."—Mr. Woodcock spoke at some length on the deleterious nature of mineral medicines, particularly calomel, and argued that they were all detrimental to the human system, even if administered in homœopathic doses. (Applause.) He urged also that the name "quack" belonged, properly speaking, unto what is now called "the old practice;" because, he said, the herbal system was the original practice, and "quack" was the name given to the German who first introduced into the medical school the use of mercury. (Applause.)

Mr. Calvert, of Wakefield, a practitioner of the Medico-botanic System, seconded the motion, and in the course of his speech gave details of some marvellous cures which he had effected both on consumptive and cholera patients.

The resolution was carried without dissent.

Mr. Newbury proposed, "That this meeting is of opinion that every man has a right to choose his own medical practitioner when sick, and that any law to prevent him doing so would cripple his liberty as an Englishman, and would be unjust and tyrannical." Mr. Newbury gave a poetic description of the old and new systems of medicine, as well as a description in rhyme of the late Medico-botanic Bazaar.

Mr. Scorer seconded the motion, and said he had great pleasure in doing so, for he considered that every man had the right to choose both the doctor and the medicine he would have in time of sickness; "but, at the same time," said he, "he's different to me that likes any." (A laugh.) He would be a queer man who could poison himself with Dr. Coffin's medicine; for it was so tarnation nasty, that his stomach would be turned before he had had enough to effect such a purpose. (Laughter.) He recommended the audience not to use either mineral or vegetable medicines, if they could do without; but if they must have physic, let it be Dr. Coffin's.

Mr. W. Booth spoke in support of the motion, and in doing so made allusion to the opposition which every great cause had encountered on its introduction for public approval. The opposition to Medical Botany would die away as the opposition to many other great discoveries had died out. The attempts that had been made to show that Dr. Coffin and his agents had failed, had never succeeded. The public mind could not be gulled for ever; the public were sure to find out the truth, and as sure as they discovered the truth would they adopt it. He hoped that the resolution would be made known to the whole world, that it might be seen that Sheffield at least was determined to act upon what it believed to be truth. (Applause.)—The motion was then put and carried.

Mr. Nadin moved the next resolution: —"That this meeting is of opinion that the science of Medical Botany, as introduced to this country by Dr. COFFIN, is simple in its nature and efficacious in its results; and that the best thanks of this meeting are due to Dr. COFFIN for his labours in the cause of suffering humanity, and pledges itself, by every possible means, to assist him in his noble and godlike work." (Applause.) Mr. Nadin made some reference to the advance which the Medico-botanic system has made in Sheffield since Dr. COFFIN first lectured in the town, now some eight or nine years ago, and expressed his own opinion, that that system was destined, ere long, to become the legalised practice of this country. Thousands in England already had to bless Dr. COFFIN for having placed in their hands a remedy for every disease. Some folks said that Dr. COFFIN had placed edge-tools in the hands of the people. He admitted that; but, said he, he has taught us how to use them; and it was so simple, that anybody who could think and read could soon learn how to use those tools. (Applause.) They were scouted by some as not legally qualified. He himself had offered to pay the fees necessary to undergo a course of lectures to qualify himself; but the medical men of Sheffield had refused to allow him to pass on account of a "personal objection." It was too bad to taunt them on account of their not being legally qualified, and at the same time refuse to allow them to qualify. (Hear, hear.) He then went on to mention some cures performed by this system, and having done so, said that these being the results, the Medico-botanic system must be of great value, and that, above all, they were immensely indebted to Dr. COFFIN. (Applause.)

The Rev. W. Taylor (of London) seconded the motion. He said: To him that meeting was a most interesting one, because it showed him that his friend Dr. COFFIN's services were appreciated in Sheffield. (Applause.) The experience of this gentleman was, that he had lost nine children, and was himself brought to death's door, under the old treatment. He heard of Dr. COFFIN, got his work, made up for himself, and took his medicines, and was cured when everybody had given him up. Dr. COFFIN was a noble, generous-hearted man — (applause) — a man of the finest feelings for his fellows; a man who had done more than all the medical men besides to alleviate the sufferings of humanity; and a man who had not sought to aggrandise himself by keeping secret a system of medicine such as this, but had freely made it known to the world. (Applause.) The name of COFFIN was treasured wherever it was known, as it ought to be, and would be had in grateful remembrance long after Dr. COFFIN had ceased to exist. (Applause.) In conclusion he, Mr. Taylor, urged upon the meeting the claims of the hospital proposed to be erected in London for the cure of consumption, as well as a college for young men studying the Botanic System, with a view to qualifying for practice.

The resolution was carried by all the people standing up. (Applause.)

Dr. COFFIN. (Applause.) He said that, since 1847, he had been trying to inculcate his doctrine, and that in no town he had ever attended was his system of such vital importance as it was to Sheffield. He alluded, in the last remark, to the disease prevalent and consequent upon working in certain trades in this town, particularly grinding. Now, when he appeared, medical men no doubt had considered the injurious effect of grinding upon the constitution of man. Grinders began to cough when they were 25; and 35 was their average term of existence. Upon this disease the medical men had written and consulted, but all to no purpose—the poor grinder was still consigned to a premature grave. Well, he must have been less than a man if he could not sympathise with the poor fellows; and the results of his labours on their behalf were well known. He took no credit to himself with regard to the Medico-botanic System beyond this—that he was the propounder of great facts —the carrier to the people, so to speak, of truths which had their origin, like all truths, in the Great Source of life and health. (Applause.) His reward he had in the gratitude of the people of Sheffield, as pronounced by that meeting—(applause) —and letters of thanks from all parts of the land, and from noble as well as from humble people. Many of these letters were from parties whom he never saw,

but who having read and followed up his "Guide to Health," had participated in its benefits. (Applause.) He therefore felt that his position was a proud one, and though he had often felt a secret pride in knowing that he had done something towards lessening the sum of human woe, never had he felt more pride than he did on that occasion, to see so many smiling faces, and to know that they participated in the advantages of Medical Botany. (Applause.) Passing on then to compare the old and the new systems, he spoke in terms of admiration of the private character of very many practitioners in the old school, and remarked that it was not against the men, but against the system that he contended. They did the best they could with a bad system. Speaking then of the spread of Medical Botany, he said his works had been translated into French and Welsh, and that their issue in German was nearly completed. Thus he hoped to spread the cause they had at heart. As to being "legally qualified," he argued upon the dictum of Baron Alderson given in a recent case in which a man, residing in Oldham, was tried for some malpractice, that legal qualification for practising medicine (quoting the words of the baron) was all nonsense, for every man, according to law, could practise; but every man was amenable to the law for malpractice, and that was all that was in it. He went into a statement about the proposed hospital, and said that several hundreds of pounds had been subscribed, and more promised, and urged its claims upon all present. He touched also upon the question of medical reform, stating that Mr. T. Duncombe, member for Finsbury, having become a convert to the Medico-botanic Practice, was determined to aid it in the House of Commons, or at all events take care, so far as he can, that no bill is introduced to its detriment. Dr. COFFIN concluded by thanking them for the honour they had done him.

A vote of thanks to Mr. Duncombe terminated the proceedings.

MEDICO-BOTANIC BAZAAR.

A BAZAAR was opened yesterday, at the Cutlers' Hall, by the friends of Dr. COFFIN'S system of medicine, the object of which is to raise money in aid of the funds for the erection of a hospital in London for the cure of consumption. The cure of this fell disease is one of Dr. COFFIN'S favourite subjects; and so far as we remember, society has some claim upon him in this respect, seeing that he—now a hale, hearty fellow of 55 or more—was once brought to death's door, labouring under this disease. This was in his early days, when in America, and *his* doctor was an Indian woman. Without saying anything about the Coffinite system—and it is the less necessary seeing the Botanic System has its thousands of living witnesses of its efficacy—we may be pardoned recommending so generous an effort as the one now being made. Of all climes England is the most fickle, and one feature of its fickleness is the disease consumption. Now, if Dr. COFFIN, or anybody, can cure this disease, be he quack or legally qualified practitioner—it seems to us that society must be immensely indebted to him. But to return: The bazaar in furtherance of the above object was opened yesterday, and so far as we could learn, it was successful. It was not so extensive, nor were the articles exhibited (as a whole) of such a costly description, as we have recently seen at bazaars; but still there was a fair mingling of the "ornamental and useful." The show of Bohemian glass and vases of every size, was infinitely superior to anything we have seen before; but in the fancy needlework there was a deficiency. Useful articles of baby linen were numerous, and there was a good show of cutlery. The bazaar will continue open for a day or two.

DRINKING AT DINNER.

NOT seldom do we hear the opinion advanced, that drinking during a meal is a noxious habit; but quite wrongfully, for the gastric juice may be diluted with a considerable quantity of water without losing its dissolving power in the slightest degree. Only a superabundance of water would diminish or arrest the peculiar action of the matters contained in the digestive fluids. Large draughts of water, therefore, will be the most injurious with aliments difficult of digestion, like the fats; and hence the drinking of

too much water after fat pork for instance, is properly avoided; but in countries where soup does not constitute a regular part of the meal, drinking water is positively to be recommended. Beer and wine at dinner are also hurtful only if taken in excess; for in the latter case the alcohol coagulates the albuminous substances not only of the food, but also of the digestive fluids, and thus disturbs digestion. If taken in a moderate quantity, these beverages are calculated to cause the meal to hold out longer; for the fact that we are not so soon hungry again after a meal with wine than if we have taken only water with it, is to be accounted for by the slower combustion of the constituents of our body, inasmuch as the alcohol we have imbibed takes possession of the inhaled oxygen. Hence, wine with a meal is extremely useful when a long journey or work in hand renders it impossible to take food again at the usual time; so much the more so, as such detention from food itself usually causes an acceleration of the metamorphoses of the tissues, which beer and wine efficiently obviate.—*Orr's Chemistry of Food and Diet.*

VARIETIES.

Influence of Temper on Health.—Excessive labour, exposure to wet and cold, deprivation of sufficient quantities of necessary and wholesome food, habitual bad lodging, sloth, and intemperance, are all deadly enemies to human life; but they are none of them so bad as violent and ungoverned passions. Men and women have survived all these, and at last reached an extreme old age; but it may be safely doubted whether a single instance can be found of a man of violent and irascible temper, habitually subject to storms of ungovernable passion, who has arrived at a very advanced period of life. It is therefore a matter of the highest importance to every one desirous to preserve "a sound mind in a sound body," so that the brittle vessel of life may glide down the stream of time smoothly and securely, instead of being continually tossed about amidst rocks and shoals which endanger its existence, to have a special care, amidst all the vicissitudes and trials of life, to maintain a quiet possession of his own spirit.—*Bailey's Records of Longevity.*

Dust.—Dust is commonly spoken of as a precise, unvarying, specific thing; the same under all circumstances and in all places. Dust is a nuisance to be despised, to be wiped away, or where not, to have the word Slut reproachfully traced on it with a finger-tip. But the microscope reveals to us dust as existing under a thousand charming and admirable forms. The microscopist is obliged to study dust attentively, that he may not mistake some stray hair, or scale, for a portion of the object he is engaged in examining. There is antediluvian dust, which was organised into beauty before Adam had come into the world to behold it; there are dust-skeletons, which constitute mountains in their immense aggregate; there is living dust, which drops from cheese, or metamorphoses itself out of farinaceous matter, or discolours water, or eats through solid oak. On a ship out at sea, leagues and leagues away from land, there falls a shower of impalpable dust, brought from the great desert by the heated winds, and close examination proves it to consist of the remains of dead animalcules. There is fertilising dust, or pollen, without whose influence neither grain nor fruit would reward the cultivator's care.—*Household Words.*

The Education of the Eye.—We may not be called upon to hunt white foxes in the snow; or, like William Tell, to save our own life and our child's by splitting with an arrow an apple on its head; or to identify a stolen sheep by looking in its face and swearing to its portrait; but we must do every day many things essential to our welfare, which we would do a great deal better if we had an eye as trained as we readily might have. For example, it is not every man that can hit a nail upon the head, or drive it straight in with a hammer. Very few persons can draw a straight line, or cut a piece of cloth or paper even; still fewer can use a pencil as draughtsmen; and fewer still can paint with colours. Yet assuredly there is not a calling in which an educated eye, nice in distinguishing form, colour, size, distance and the like, will not be of inestimable service. For, although it is not to be denied that some eyes can be educated to a much greater extent than others, that can be no excuse for any one neglecting to educate his eye. The worse it is, the more it needs education; the better it is, the more it will repay it.—*The Five Gateways of Knowledge, by Professor G. Wilson.*

Unhealthiness of Country Habitations.—Much as the pure air of the country is conducive to the preservation and restoration of health, it often happens that rural abodes are the seats of disease engendered by the carelessness, the obstinacy, the stupidity, or (too frequently) the helplessness of their occupants. And with all our sanitary improvements in our towns, we have still to deplore the evils arising from inattention to the hygienic laws of nature, in the very domain of nature herself. Yet such is the fact, as the following extract from the Registrar's Quarterly Returns will prove: "There is room for immense improvement in the sanitary condition of our country population. The germs of insalubrity are scattered about in every village; for the natural laws of health are violated alike in the cottage and in the farm-house. The dwelling-houses sometimes rest on damp and undrained ground; they lie often at the bottom of pitlike depressions of the earth, instead of standing on the sides of the higher

grounds, from which the waters flow away naturally, and the decayed organic emanations are dispersed and decomposed by the winds. The farmhouse is often close to the farmyard, on a low part of the farm, and is surrounded by buildings, ricks, and trees. In the yard, or near it, the refuse of the house and of all the animals is kept month after month undergoing fermentation, and giving off noxious vapours. Into the pond, out of which the cattle drink, the ammoniacal liquor falls, that should find its way over the land. And it happens that if the air is stagnant for some days, if the temperature is high, if some sick person or diseased animal enters the place, which is surrounded by salubrious fields, the farm becomes a scene of suffering; the cattle perish by pleuro-pneumonias, the children are attacked by scarlatinas, the wife has low fever, or the farmer himself dies, and his name, at a premature age, is enrolled in the register of deaths. About six thousand four hundred and twenty six English farmers die in a year, and of them many are young; two thousand six hundred and five are under sixty-five years of age."

THE PHILOSOPHY OF SNEEZING.—A sneeze always indicates that there is something wrong. It does not occur in health unless some foreign agent irritates the membranes of the nasal passages, upon which the nervous filaments are distributed. In case of cold, or what is termed influenza, these are unduly excitable, and hence the repeated sneezing which then occurs. The nose receives three sets of nerves; the nerves of smell, those of feeling, and those of motion. The former communicate to the brain the odorous properties of substances with which they come into contact, in a diffused or concentrated state; the second communicates the impressions of touch; the third move the muscles of the nose—but the power of these muscles is very limited. When a sneeze occurs, all these faculties are excited in a high degree. A grain of snuff excites the olfactory nerves, which despatch to the brain the intelligence that "Snuff has attacked the nostrils!" The brain instantly sends a mandate through the motor nerves to the muscles, saying, "Cast it out!" and the result is unmistakable. So offensive is the enemy besieging the nostril held to be, that the nose is not left to its own defence. It were too feeble to accomplish this. An allied army of muscles join in the rescue; nearly one-half of the body arouse against the intruder; from the muscles of the lip to those of the abdomen, all unite in the effort for the expulsion of the grain of snuff. Let us consider what occurs in this instantaneous operation. The lung becomes fully inflated, the abdominal organs are pressed downwards, and the veil of the palate drops down to form a barrier to the escape of air through the mouth; and now all the muscles which have relaxed for the purpose, contract simultaneously, and force the compressed air from the lungs in a torrent out through the nasal passages, with the benevolent determination to sweep away the particle of snuff which has been causing irritation thereon. Such, then, is the complicated action of a sneeze; and if the first effort does not exceed, then follows a second, a third, and a fourth; and not until victory is achieved, do the army of defenders dissolve their compact, and settle down to the enjoyment of peace and quietude.—*Journal of Medical Reform.*

SUBSCRIPTIONS
FOR THE BOTANIC HOSPITAL.

Collected by Mr. Austin £1 0 2

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Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague-place, Russell-square, daily (*Sundays excepted*), from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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BOTANICAL JOURNAL
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MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

No. 224—Vol. VII. SATURDAY, DECEMBER 13, 1856. Price 1d.

THOMAS S. DUNCOMBE, ESQ., M.P.

As many inquiries have from time to time been made respecting the health of this gentleman, I think it right to state to his numerous friends that his health is very much improved, and that it is my opinion he will not only be able to attend to his duties in Parliament, but that he will enjoy better health for the future than he has done for many years.

A. I. COFFIN, M.D.,

24, *Montague-place, Russell-square.*

THE INCLEMENT SEASON AND BOTANIC MEDICINES.

The vicissitudes of this climate are very trying to all constitutions, but especially to the weak, the delicate, and the aged. At the present season there is a great amount of catarrhal disease, arising partly from the sudden changes of the weather, and partly from the injudicious use of alcoholic drinks. Most person admit that stimulants are necessary to keep up internal heat, but commit a grievous error when they resort to spirituous liquors for that purpose. The tendency of all spirit is to evaporate, and hence if a person should burn his hand, the remedy most efficient would be to apply the strongest spirits of wine which can be obtained, to the parts affected; because the process of evaporation of heat would be greatly accelerated until a moderate degree of coolness would be produced. This simple illustration will show the folly of attempting to augment the amount of physical heat by taking alcoholic drinks. They are no sooner introduced into the stomach, than they begin to throw off vapours which irritate and disturb the tranquillity of the brain, and leave the temperature of the body several degrees lower than it was before. Nothing is more common, at this time of the year, than to hear a friend, in the fulness of his mistaken hospitality, say, "Come, take a glass to keep out the cold."

Our readers perhaps may reproach us with cruelty in endeavouring thus to put them out of conceit with their favourite beverage, and especially at a time when they think they most need it. We might deserve their reproach, if we had not a substitute which we could heartily recommend with confidence in its entire efficiency. The whole system of Medical Botany proceeds on this great principle, namely, HEAT IS LIFE—a deficiency of heat is disease—its entire absence is death. The botanic remedies contemplate a restoration of the equilibrium of heat. We recommend a free use of cayenne pepper with all kinds of food, especially with vegetables, fruits and soups. By this means it will be found that a larger amount of caloric is generated in the body, and the heat will be retained. So that, while due attention should be paid to clothing, yet it will be found, that the man who is wrapped in flannels inside, and great-coats outside, and takes alcoholic drinks to his heart's content, will be found shivering and complaining of cold; but the man who is only moderately clothed, and abstains from spirituous

liquors, and takes cayenne, enjoys a most agreeable glow of warmth.

The stomach bitters may be taken with great advantage at this season of the year, and they will prevent those fearful attacks of diarrhœa which are so common among those who resort to strong drinks and calomel. We have recently met in the street two men, one an adherent to Botanic Medicine, and the other a victim to calomel and strong drink. The thermometer was then standing at twelve degrees below freezing point. The first had on only one coat, a thin neckcloth and an open-breasted waistcoat; but his eye was clear, his complexion not much unlike the hue of the monthly rose, and he confessed that he did not feel the cold; the other was wrapped in a thick great coat, a large shawl round and round his throat, and double gloves on his hands, his complexion was of that extraordinary character in which the preponderating tinge was a decided blue, as though he had quarrelled with his servant, and she had banged the blue-bag about his face; but though he had washed afterwards, all the cerulean tinge could not be taken out. This man complained bitterly of the cold, and his chattering teeth and watery eyes corroborated the statement. He is one of those who laugh at Medical Botany, and "takes his drops to keep him warm." How far he succeeds, let his miserable appearance determine. Facts are better understood than any lengthened theory and well-constructed argument. Our request is, that our readers will make observations for themselves. If they wish to make weather-indicators of themselves, let them take calomel and drink spirituous liquors, and they will then most certainly arrive at that high degree of sensitiveness, that they shall feel every change of the wind and the atmosphere, and endure a higher degree of suffering from cold, than they possibly can by any other means. These will prove the present realised results, and they may look forward with certainty, that if their lives are spared, there is a large store of suffering in reserve for them in the shape of rheumatism and other undesirable afflictions and diseases. But if, on the contrary, they will but shun calomel as they would arsenic, and abstain from spirituous drinks as they would from strychnine, and if they will use cayenne pepper and take frequent doses of the stomach bitters, they may enjoy a healthy warmth, resist the baneful influences of temperature and change, and retain vigour to enjoy a healthy, happy old age, which we heartily desire for them.

COMPULSORY VACCINATION.

As we are now rapidly approaching the period when the vaccination law is to come into operation, it is a duty we owe to our readers to put them in possession of an abstract of the law, and to point out some reasons for our decided objections to it. Happily we are anticipated in this undertaking by the valuable pamphlet before us, from the pen of that judicious and determined opponent of vaccination, George S. Gibbs, Esq., entitled "The Evils of Vaccination, with a Protest against its Legal Enforcement." We shall at present content ourselves with a few extracts, and continue them in our future numbers.

In 1853, an Act, popularly known as the "Vaccination Extension Act," was smuggled through Parliament, which made compulsory, under a fine of twenty shillings, the vaccination of every child born in England or Wales after the 20th of August in that year.

In the House of Commons, on the evening of Thursday, March 6, 1856, "Mr. Cowper (President of the Board of Health) obtained leave to bring in a 'Bill to consolidate and amend the laws relating to vaccination.'" On the evening of the succeeding Wednesday (in less than a week) he moved that the Bill be read a second time, when Mr. Barrow, M.P. for South Nottinghamshire, requested a postponement of the motion until after the Easter recess, as the Bill had reached the hands of members only that morning. Mr. Barrow's request being ably seconded by Dr. Michell, who denounced the measure in forcible terms, it was acceded to.

This Bill, based partially on the second report of the Epidemiological Society, sets forth, in its preamble, the existence of certain vaccination laws, and declares that "it is expedient that they should be consolidated and amended, and that the

compulsory practice of vaccination should be extended."

How the compulsory practice is to be extended we learn from the clauses:—

I. "The word 'Child' includes every person up to the age of *thirteen* years." (Why *thirteen?*—in accordance with some odd theory of numbers?)

III. "This Act shall apply to England, and shall be in force from and after the 1st of January, 1857."

XI. "The parent or guardian of every child born in England on or after the 1st day of January, 1857, shall, within *four* months, bring the child for vaccination to the public vaccinator appointed in the Union, who shall thereupon vaccinate such child."

XII. "Upon the *seventh* day after the vaccination, the parent shall again bring the child for inspection, in order that the result may be ascertained and registered."

XIII. "If a public vaccinator shall ascertain, on such inspection, that the vaccination has not been successful, he shall again vaccinate the child; and the parent shall bring the child for inspection on the *seventh* day after such second vaccination, *and so on as often as need be*, until the child shall have been successfully vaccinated, or till a certificate of insusceptibility to vaccine disease, be given in the manner provided by this Act."

XIV. "Every public vaccinator, within a week after the successful vaccination of any child, shall furnish to the Registrar a certificate" of the same; "and if any child shall, after three vaccinations at intervals of not less than *two* months, prove for the time insusceptible of vaccine disease, such public vaccinator shall furnish to the Registrar a certificate of such insusceptibility: *Provided that no such certificate shall be in force for more than* ONE YEAR *from its date.*"

XVI. "The parent or guardian of every child in England (up to thirteen years of age), on or after the 1st day of January, 1857, who shall not already have been successfully vaccinated, nor had small-pox, shall, within *four* calendar months, bring the child to the public vaccinator for the purpose of being vaccinated, and shall on the seventh day, &c."—as in Clause XII.

XXIII. "It shall be lawful for the managing committees of schools receiving aid from Government grants, the masters of workhouses, and keepers of lunatic asylums, and governors or keepers of prisons, to inquire into the vaccination of children attending such schools, or of the inmates of such workhouses, asylums, or prisons, respectively, *and to direct the vaccination of all such persons therein as they find unvaccinated.*"

XXIV. "It shall be lawful for the medical practitioner appointed by the emigration officer at any port to certify as to the health of the passengers or crew of any vessel carrying emigrants, to inquire into the vaccination of the said passengers or crew, and the emigration officer *shall have power to require* and provide for the vaccination of any persons found unvaccinated."

XXVI. "It shall be lawful for the *General Board of Health*, when small-pox is prevalent in any part of England, *to issue special regulations and directions* with respect to the steps to be taken for preventing the spread of the disease by *re-vaccination or* OTHERWISE!"

XXVII. "In the case of the death from small-pox of any child born since the 20th day of August, 1853, it shall be lawful for the coroner to summon a jury for the holding of an inquest on the body of such child; and if it shall be proved that such child has not been vaccinated, the jury shall find a verdict accordingly, and the coroner shall notify such verdict to the guardians or overseers" of the poor, "who may thereupon proceed against the parent or guardian" of the child "for the recovery of the penalty imposed by this Act."

XXIX. "The parent or guardian of any child born since the 20th day of August, 1853, not having caused such child to be vaccinated, or not having procured a certificate of insusceptibility to vaccine disease, shall be liable to a penalty not exceeding twenty shillings: every person refusing or neglecting to comply with any requirement of this Act shall be liable to a penalty not exceeding *twenty shillings*, and in the case of a continuing refusal or neglect, to a penalty not exceeding FIVE SHILLINGS *for every day during which such neglect shall be continued:* (sufficient to reduce to pauperism

a vast majority of the people!) Whosoever shall wilfully obstruct any person acting under the authority or employed in the execution of this Act, or shall wilfully violate *any* regulation or direction of the General Board of Health issued under this Act, shall be liable, for every such offence, to a penalty not exceeding *five pounds*."

Now, there are many persons who object to the practice of vaccination on various grounds; and first are those who regard the introduction of a disease into the system, under the pretence of keeping it healthy in futurity, or, indeed, under any pretence whatever, not merely as a gross absurdity, but as a direct violation of the law of God; for if the soul's health be the primary object of care, the blessed gift of bodily health is surely not to be treated with contempt.

But there are others who object to vaccination on the ground that it is not what it pretends to be, viz., a protection against small-pox. They say that a glance at the varying mortality from this disorder in successive years is sufficient to prove this proposition. For instance, the deaths in London from small-pox were—

In	1838 ...	3817	In	1845 ...	909
„	1839 ...	634	„	1846 ...	257
„	1840 ...	1235	„	1847 ...	955
„	1841 ...	1053	„	1848 ...	1617
„	1842 ...	360	„	1849 ...	518
„	1843 ...	438	„	1850 ...	498
„	1844 ...	1804	„	1851 ...	1066

The deaths in all England and Wales fluctuate in the same manner.

Their evidence does not end here. The returns of the Small-pox Hospital show that during a period of eleven years, out of an aggregate number of 4,055 patients, 2,167, or more than half, had been vaccinated; and, further, that in a particular year, 1852, 570 out of 800, or more than two-thirds of the patients admitted, had been vaccinated. Neither do vaccinated patients invariably suffer less than unvaccinated, for Dr. Gregory (who was for some fifty years physician to the London Small-pox Hospital) informs us that out of 298 vaccinated patients admitted into the Small-pox Hospital in 1838, there died no fewer than 31. As, however, a single case is sometimes more striking than many pages of figures, I will give one in the form of a "Report of a case of vaccinia (cow-pox) and variola (small-pox), occurring simultaneously, by John Clarke, M.R.C.S. and L.A.C., Kenilworth:"—

"Having read in the *Lancet*, a short time since, the report of an interesting case of vaccinia and variola in an infant, I am induced to relate a very similar case, which occurred in an adult.

"E. C——, aged 22, who had been vaccinated in her infancy, was *revaccinated* by me, December 6th. On the fourth day no small red spot was visible, consequently I concluded either that the vaccine disease would be retarded in its course, or would not be produced at all. In two or three days afterwards I was called in a great hurry to see this patient; I found her in bed, very much alarmed, suffering intense pain in the loins. On the third day an eruption appeared, which in two days assumed a somewhat livid aspect, the throat at the same time being highly inflamed, and so constricted that it was with the greatest difficulty she could swallow, even fluids. She likewise aborted, and had considerable hæmorrhage afterwards. On inspecting the eruption on the vaccinated arm, *I discovered two genuine vaccine vesicles*, such as you would expect to see from primary vaccination; this was about the twelfth day after the insertion of the lymph. *I was certainly surprised and somewhat dismayed* at seeing the worst form of variolous disease occur simultaneously with that of the vaccinia: suffice it to say, this poor woman died after an illness of six days."

It is true that the mortality from smallpox is less, much less, than formerly; but to place this result entirely to the credit of vaccination is to leave out of view that smallpox is an *epidemic disorder*; that it was epidemic in this country some fifty years since, and for a long time previous to that; that it was kept in existence by the practice of inoculation; and that its fatality was fearfully increased by the barbarous method of treatment, thus described by a biographer of Sydenham:—"The usual mode of dealing with this then fearfully virulent disorder, as with eruptive fevers generally, was as opposite as could well be imagined to the dictates

either of nature or common sense. The unhappy patient was loaded with bed-clothes; lest one refreshing breeze should fan his burning frame, the curtains were drawn closely around; whilst, under the notion of the existence of a putrescency and dissolution in the blood, he was all the time plied with a round of stimulants and cordials, to say nothing of the perhaps less potent, but more disgusting ingredients with which good care was taken that they should be sufficiently charged, described altogether by a nearly contemporary physician, as 'Venice treacle, Virginian snakeroot, zedoary, saffron, volatile salt of hartshorn, powder of vipers' flesh, and the like.'"

(To be continued.)

SELF-DENIAL.

THERE are those who evidently act on selfish principles. All their doings tend to self. They care not for others, except so far as they can make use of them for their own purposes. They lament not their ruin, if it does themselves no harm. Such persons are generally disliked, and as generally condemned. There is something in the human heart which at once passes sentence on such gross selfishness, as alike in opposition to Christianity and humanity. It is not to persons of such a character that we address ourselves. We intend what we write for those who believe that self-denial for the good of others is a Christian duty; and that self-denial we urge them to exercise as regards the use of intoxicating drinks.

We believe there is much more self-denial amongst Christians than the world gives them credit for—that much is done and given to alleviate the woes of humanity, and to advance the cause of Christ; that besides what comes to be publickly known, there are deeds of benevolence performed, and self-sacrifice shewn, which triumphantly prove that the spirit of the Gospel exists and operates—that there is a living, self-denying principle at work, widely diffused amongst the churches of our land. To Christians we give all the honour which such undoubtedly merits. But we must confess that we have been astonished at so many evincing such reluctance to deny themselves in this one thing we would wish them to lay aside and discontinue. We do not charge you, Christian friends, with intemperance; we do not even say that you are on the verge of it. You believe that you are in no danger, although you must admit that many as unlikely as you have fallen, and we say to you what we say to ourselves, *there is danger in the use of the drink.* But granting that there were no danger to yourselves —that there were a certainty you should never become slaves to it—that it has so slight a hold of you that you could give it up at any time; yet may it not be your duty to lay it aside—to exercise self-denial for the sake of others? You answer, perhaps, that it would be *no* self-denial for you to give it up—none whatever. So much the better, say we; but why adhere to the use of it in such a case, if thereby you do anything to induce, perpetuate, or increase intemperance? You answer that you do not see you do any thing towards such, and that if you did, you would renounce the use of it altogether. Well, then, you will not deny, we presume, that the drinking customs of our country have a powerful influence in the production of the intemperance that is so sadly prevalent, and in the keeping of it up. We would imagine you will also admit, that the countenancing these customs tends to sustain them—that if no one were to countenance them they would go down, and that a great deal of intemperance would cease with them. If then you fall in with such customs, and thus uphold them, and if their existence tends to intemperance, it does seem to us that your influence must go in the same direction. And be it remembered, that just according to your Christian profession and the consistency of your general practice with that profession, so much the farther does your influence go, and so much the greater is it. Persons esteem these customs so much the more, because *you* support them and act as if you believed no harm likely to result from them. The more you are esteemed, and the more justly so, exactly in that proportion will you have an influence in encouraging others to imitate your example, and to use intoxicating drinks.

But, say you, "our example goes only to the *moderate use of them*—if those who drink would imitate our example, they would stop where we stop; they would not become drunkards; they go beyond our example when they go farther than moderation." Granted—what then? If the customs you support keep up a system the issue of which so frequently is intemperance, and without the existence of which it is questionable if we should have intemperance to any extent, if at all; must it not follow, even though you never go to any excess, that your practice does tend to such an evil result? It is clear that others do go farther than you, and become drunkards. You say they *ought* not. But what if they cannot help going farther than you, when they have got your length? What, if when they imitate you so far, they cannot restrain themselves, but that on them the drink has such an influence that, with as sincere a wish and resolution as you to go your distance and no farther, they, in following you to that point, find themselves impelled to proceed onwards, and the consequence is that they become drunkards? What if such should happen? Have you no responsibility in such a case? Have you not *helped* to such a result? Do you say NO? and answer that you showed them an example of moderation to which they have not kept, and that the fault is theirs, not yours? And do you ask us, "Am I bound to give up the use of the drink for their sake?" Our reply is, *We think you are.* We think the spirit of the Gospel requires it. Your example encourages to the use of the drinks, the weak brother uses them, does so with no apprehension of danger, does so with a belief that he is safe, because he is doing as you do. But then he is a *weak* brother, and it is no fault or shame to him perhaps that he is. He is differently circumstanced, differently constituted. He imperceptibly passes the boundary line—in no case well defined—and is lost. Your use has led him to his abuse; and as it does, the self-denying principle of the Gospel requires you to abstain, for his sake. It was on this principle the apostle acted when he said, "If meat make my brother to offend, I will eat no flesh while the world standeth, lest I make my brother to offend." "It is good neither to eat flesh nor to drink wine, nor anything whereby thy brother stumbleth, or is offended, or is made weak."

Perhaps you say, "*I don't know* that such has been the effect of my example, or is likely to be so—I know not that any ever have been led astray by it, or ever shall." Well, there are cases, at any rate, and these numerous, in which the connexion can be clearly traced, and if it should not be evident in respect to you, it may be no less real. But the Christian should not require that it be demonstrated to him, beyond a doubt, that such has been the result; he will not require such, if he act aright. If there be a likelihood, if there be even a possibility of such following, he will feel called upon to take the opposite course where it cannot occur. The principles of the Gospel go that length; and he who is not prepared to proceed so far seems to us not to have attained to the realisation of the full bearings of such principles upon life and conduct. Would it not be better, instead of acting so as by possibility even to lead unto sin, to take the opposite course, to act in such a manner that there could be no evil from your example—that all its tendencies should be to lead away from the scene of temptation and danger those over whom you have an influence? What Christian is there who is not willing to allow this in regard to general conduct? and why not in regard to this?

"But would my abstinence really have any effect—would it influence others? If I thought that, I would practise it most willingly." Do you say so? then we would beg you to remember that, even if it had no positive influence, it would at least have this negative effect, that there would be no encouragement to the use of the drink—as there is when you partake of it however moderately—that thus there would be no encouragement to any course which could possibly issue in intemperance. But it would have its positive effect as well. There is no one whose example is without an influence, more or less powerful; and the influence of every one who adheres to any

right principle must be for good. So would yours. If you doubt it, we urge you at least to make the trial. Many sceptical upon the point have proved it, to their fullest satisfaction, and are now rejoicing in the good effects which have followed from the adoption and carrying out of our principles. If your abstinence would require from you the exercise of self-denial, so much the greater influence and effect are you likely to have. Those for whose sake you abstain will not be the last to notice it, nor to feel its effect. Many instances we have met with, many more than justifies us in urging on you the trial. Let us give but one. Just the other day, we were told of a Christian lady, whose efforts on behalf of her poorer sisters around her were energetic and untiring. In carrying out these efforts, she found drink her great obstacle. It met her on every hand. In one way or another it was perpetually crossing her path, and in no way more certainly or frequently than in the intemperance of those she was striving to benefit. She reasoned with them, and they admitted readily enough the truth of all she said, but still drank. She saw that nothing else would do for them but abstinence, and she urged that. Her counsel was disregarded. She found out the reason in the remark of one with whom she was specially earnest.—"You'll take a little yourself, I daresay, of some kind, at the dinner-table or the like." She saw the obstacle to her influence, became herself an abstainer, told them she had done so for their sakes, got not a few to do the same; and now fifteen years after, she can look back with pleasure on the course she then began, and has since pursued, from the great good that has been the result. We cannot imagine a follower of the self-denying Saviour refusing to do what this Christian lady did, if convinced that similar effects would ensue. And in the present state of our country as to intemperance, and with the ability to point out many such instances, we surely are not calling on you for an unreasonable thing, Christian friends, if we ask you to practise this slight self-denial for the sake of those around you, and for the sake of Christ. The *utmost* that you can plead as to intoxicating drink, is that the Bible *admits* of the use of it; you cannot show a single passage which, directly or by inference, commands its use, or forbids you to abstain. There is much to urge to self-denial for the sake of others—the very spirit of the Gospel and its founder is such; and where the self-denial would be trifling, and the good certain to follow so great, there is not a little to recommend the immediate adoption and carrying out of such a principle.

A word or two in regard to the season of the year that is approaching, and its connexion with this exercise of Christian self-denial. That season is one of festivity and social enjoyment. We have no wish to limit the true pleasures of the people. All our efforts and desires have a different direction. In the season that is at hand, drink often does deadly evil. Brought forward at the festive board, it has a seductive influence, which has led many astray. Many have dated their ruin from such scenes as have been prevalent at such a time. Christians have given their countenance and support to the drinking customs at Christmas and New Year, and have thereby, incautiously and unintentionally, done evil. Let us urge you to abstain, to shew an example such as our youth shall not be in danger by it. We do not ask you to shroud yourselves in gloom, and to frown upon the innocent enjoyments of such a season; but though it should cost you the exercise of self-denial—though you should have found pleasure in partaking of such drinks at such a season—though you should have found them provocative of hilarity and leading to it—though all this and much more should be the case, we do urge you not to let them have your countenance on this occasion—to banish them from your house—to show your children and friends that they are not necessary to real enjoyment, and to happy Christmas and New Year meetings. Wherever you go, let your influence be felt in that way, and you will be doing, we believe, Christian and Christ-like acts. You may be saved thereby the sin and the sorrow of leading others astray, and may be instrumental in guiding past the danger those who would have been ruined by it, or for-

tifying in a right course those who had begun to pursue it. In such you will find a reward—a rich reward for the exercise of self-denial, were that required, vastly greater than in this case is even possible.

VEGETABLE REMEDY FOR SNAKE BITES.

It is a common belief, that the natives of those countries to which venomous reptiles are indigenous, are accustomed to employ, for the healing of snake-bite wounds, and the prevention of their deadly effects, certain herbs which possess a specific virtue, and which, if applied in time, infallibly prove an antidote. It is desirable that this opinion should be tested by experiment; since the love of adventure, or the desire of gain, leads our countrymen to explore regions which are not only infested by noxious animals, but which possess likewise a poisonous atmosphere and an insalubrious climate. To the Medical Botanist, an investigation into the antivenomous properties ascribed to any vegetable must be peculiarly interesting, since every successful result of such experiments as are detailed in the following extracts will confirm that first principle of our science, that Nature has provided for every kind of ill that afflicts the body a remedy which is to be found in her "vegetable kingdom." The experiments we allude to were tried under the auspices of the Society of Arts, and are thus described in a record of the proceedings:—Some experiments were lately made at the Society of Arts with the view of testing the efficacy, as an antidote to the bite of venomous snakes, of a root which has been recently brought to this country by the Hon. R. Temple, late Chief Justice of Honduras, and which, if not the veritable guaco so famed among the Indian tribes for its medicinal properties, resembles it closely in appearance, belongs to the same class of serpentaria, and is universally reputed throughout Central America to possess similar virtues. Mr. Temple, while admitting that there was reason to doubt whether Botanists would accept the herb as identical with guaco, observed that it was so regarded by the natives of Honduras, who invariably had recourse to it when bitten by snakes—a calamity to which they were constantly liable while employed in cutting down logwood and mahogany, or engaged in the pursuit of game. The venom of the snake is so rapid in its action that an immediate application of the antidote was of course an essential condition of recovery, and it was the practice of the natives to administer the herb both externally and internally with as little delay as possible. The stalk, leaf, and root were all supposed to be equally efficacious, and after the patient had taken a strong dose of the tincture or infusion, it was customary to apply a poultice of the leaves to the wound. Whether the powers ascribed to this herb by the snake-charmers and natives of Central America were real or imaginary, and whether the efficacy of the plant was universal or limited to the bites of the reptiles indigenous to that part of the world, were problems which yet remained to be solved, and which assuredly deserved the attention of pathologists. Unfortunately, the experiments of the society were not so successful as might have been anticipated. It was determined to test the potency of the plant both as a repellant and a remedy, and for this purpose some eight or nine drachms of the infusion were given by Dr. Chambers to a healthy rabbit, which was then put into the same box with two puff-adders of the deadliest reputation, procured from the Zoological-gardens. For more than ten minutes the snakes endured the presence of the intruder—if so he may be called who enters less by his own act than by that of another—with exemplary resignation, but finding that his visit was prolonged beyond reasonable duration, they flew fiercely at him, and one of them bit the poor martyr of science in the mouth. On being taken from the cage the same infusion was again administered, and the wound was fomented; but the hind legs became rapidly paralysed, tetanic convulsions supervened, and, though a small dose—not more than two drachms—of the tincture was given, the animal languished and died in thirty-five minutes from the time it was bitten. It was understood, however, that the experiments would be repeated on other subjects in the course of a few days. Owing to the contraction of

the jaws, but little of the second dose of the infusion reached the stomach of the rabbit, and Mr. Temple was of opinion that the tincture would have afforded a fairer test, inasmuch as it had been prepared from the herb in a comparatively fresh state; whereas the infusion was made from the dry root, which may possibly be of inferior strength. In any case it is clearly desirable to ascertain the precise value of this famous specific. If it indeed have the precious properties attributed to it by the native Indians, it may save many lives and give confidence to those workmen who may be employed in the construction of any of the great interoceanic railways or canals which are projected, and which would necessarily be carried through regions in which venomous reptiles abound; but if, on the other hand, its virtues are purely visionary, the fact should be established beyond controversy, for these popular delusions impede the progress of science, and there is much truth in the saying of a great writer, that "he who destroys an error achieves an Herculean task, and rids the world of a monster."

DIAPHORETICS.

THE importance of perspiration, whether regarded in its ordinary character as a regular function of the animal economy, or as a means of curing disease, is a fact of primary consequence in the system of Medical Botany; and any light which may be thrown on the subject is always welcome to the earnest seeker after useful information. To know how a sudorific agent operates, when to recommend or to use it, and the length of time it should be persisted in, must be of incalculable advantage to the Medical Botanist. Hence we deem it needless to apologise for laying before our readers anything which can be turned to profitable account, whether we find it in the writings of allopathists or others. Indeed, we might say of our Journal, that "it is like unto a man who bringeth out of his treasury things new and old." On the present occasion we are indebted to the work of a recently deceased physician on the subject of materia medica for the following extracts, which we have no doubt will prove acceptable to our readers. The author says:—

The primary effect of diaphoresis is the evacuation of a large portion of the aqueous part of the blood; and therefore it might be supposed that this vital fluid would become thicker; but various circumstances concur to prevent such a result; amongst others, thirst always accompanies sweating; and as this forces us to take fluids into the stomach, the waste of the aqueous matter thrown off by the skin is rapidly supplied. At this time also other fluid excretions are diminished—the urine, for instance—so that the watery matters which would be carried off by the kidneys are diverted to the surface; and even several substances, that naturally find other outlets, are expelled by the skin; this is clearly demonstrated in some diseases. Thus, in cases of ischuria renalis, or deficient action of the kidneys, the perspiration has been found to contain uric acid. Dr. Percival relates a case in which the perspired matter was so saturated with the salts of the refluent urine as to crystallise on the surface of the body in form of a white powder.

One unquestionably beneficial effect of diaphoretics is the determination of the blood from within to the surface, thereby relieving congestions, and maintaining that due balance of the circulation which appears to be essential to the preservation of health. Their salutary influence is also displayed in the increased power of the capillaries, and in their relaxation of the surface in febrile affections. The relaxing effect of diaphoretics is indeed the most important property they possess as remedial agents; and on it their utility in inflammatory affections depends. Were we, however, to attempt to induce diaphoresis in inflammatory or febrile diseases by stimulating diaphoretics, the desired effect would not only be prevented, but the hazardous symptoms would be aggravated. This fact is too seldom kept in view; and, in ordering diaphoretics in fevers, practitioners often forget that the substances employed as such, almost always increase vascular action before they produce diaphoresis. Several circumstances, therefore, are necessary to be attended to in

the administration of this class of medicines in a practical point of view.

1. Whenever diaphoretics are indicated, the patient should be confined to bed, in order to secure an equable temperature; but he should not be overloaded with bed-clothes, which also should be of a light, spongy texture. The surface, also, should be preserved from the action of cold air; and the patient cautioned not to drink cold liquids during the flowing of the perspiration. If the pulse be full, hard, and quick, and the skin hot, the bowels, should be freely opened. It is a correct opinion, that free perspiration is not consonant with a quick, hard pulse, and a temperature of the skin exceeding 102° of Faht.: if sweating occur in this state, it is generally partial, and rather injurious than salutary. Even after the reduction of the phlogistic diathesis, the diaphoretics to be selected should be those which nauseate and relax the surface.

2. The free use of tepid diluents is necessary during the administration of diaphoretics, unless the stomach be in a highly irritable state. When the temperature of the surface is high, before the sweat flows, the diluents should be cold, or nearly so; but when it is moderate, they should be tepid. So important is dilution in promoting the action of diaphoretics, that even simple colds and tepid fluids introduced into the stomach during the hot stage of fever often produce diaphoresis.

3. During the administration of diaphoretics, it is essential, as has been already said, to use bad conductors as coverings; both the body-clothes and the bed-clothes of the patient should be flannel, which, being of a light, spongy texture, not only preserves an uniform temperature, but also absorbs the moisture as the perspiration flows. When a linen shirt is worn, and the patient lies in sheets, the moisture accumulates; for linen, being a better conductor of caloric than air, carries off the heat too rapidly, condenses the vapour of perspiration, and chills the surface. Attention to this circumstance is most essential, if it be requisite to keep up the sweating for ten or twelve hours, or longer; and especially if sleep becomes necessary during the continuance of the sweating. The older practitioners invariably resorted to the use of flannel during diaphoresis—a custom which has been too hastily reprobated by some modern physicians, as not only unnecessary, but even injurious: they recommend, instead of flannel, frequent changes of well-aired linen, asserting that this is more refreshing to the patient; that, from its comfortable feel, it has a tendency to allay irritation, and, consequently, to aid in subduing the restlessness and inquietude of fever; and that it is essential for carrying off the fomes of the disease. The last part only of this opinion is well founded, and few practitioners would place a patient, labouring under an infectious fever, in flannel; indeed, under such circumstances, perspiration, to the extent which requires the use of flannel, is neither necessary nor desirable.

4. Attention must be paid to the state of the bowels and kidneys. If perspiration be necessary in the low stage of fever, purging must be studiously avoided; and it should be checked if it occur spontaneously whilst sweat is flowing; as it is almost certain to check the sweating, and to aggravate the disease, by diverting the blood from the surface to the interior, and exposing the patient to cold. The utmost care, indeed, as already stated, must be taken to prevent the admission of cold air to the surface; and no cold liquids should be taken into the stomach whilst the sweat is flowing, and for some time after it has ceased. This is not at all at variance with the opinion which has been advanced, that sweating is excited by the introduction of cold water into the stomach in the hot stage of fever. During the administration of diaphoretics, everything which has a tendency to promote the secretion of the kidneys, especially cold air, should be avoided. Abstaining from frequent changes of linen is in conformity with this rule; as, in effecting these changes, the surface must be necessarily exposed, and as much drink is generally given to promote the sweating, the redundant fluids will be suddenly determined to the kidneys, and the action of the cutaneous exhalants checked.

5. The morning, directly after sleep,

is the best period of the day for administering diaphoretics, as the system is then easily excited, and the surface is more relaxed. Experience has demonstrated that many persons, in whom perspiration cannot be induced at any other period of the day, may be readily made to sweat at that time. When perspiration accompanies disease, it generally occurs in the morning; there is then a natural decline of febrile excitement, which aids the action of diaphoretics; hence it is the most favourable time for their operation: and, besides, as the administration of diluents is necessary to maintain the diaphoresis, this is a more convenient period for their administration.

6. When sweating is to be checked, the skin should be carefully dried with soft, warm towels, the patient should be moved into dry flannels, and the covering of his bed gradually lessened; allowing the arms to be cautiously exposed to the air. By these means the injurious consequences which a sudden revulsion might occasion are avoided.

Diaphoretics operate in two distinct modes:—1st, some excite the cutaneous capillaries and exhalants to a degree sufficient to increase both the secretory and the excretory functions of the skin beyond that point at which the perspired matter is carried off in the insensible form: hence it appears as a copious watery excretion or sweat; and the substances inducing it are distinguished from other diaphoretics by the term sudorifics, or promoters of sweating. 2dly, some operate in the same manner, but so moderately that they merely augment the ordinary insensible perspiration. It is true that both these results may be obtained by modifying the dose of the substances employed, and the circumstances under which they are administered; but, nevertheless, there are some substances, by which, all circumstances being equal, a more powerful effect is produced than by others. For these reasons, diaphoretics may be arranged into—

1. *Sudorifics*,—substances causing a copious, watery, cutaneous excretion, or flow of sweat.

Sweating may be produced—1, by substances taken into the stomach;

2, by their application to the surface;

3, by violent muscular action, throwing so much blood upon the surface as to excite powerfully the secreting function of the skin, and, consequently, greatly to augment the perspiratory discharge. Exercise, therefore, may be regarded as a remedial sudorific; and it has been found of much use in dyspeptic affections, in which the skin is generally harsh and dry. It is easy to understand this effect of exercise; for, if we admit that the function of digestion may become depraved by too large a quantity of blood being thrown upon the gastric vessels, the determination to the surface, which is the result of exercise, will necessarily relieve this morbid condition of the stomach.

2. *Diaphoretics*,—substances which only augment the ordinary perspiration.

This may be induced—1, by substances which operate through the nervous system, when they are taken into the stomach;

2, by those that operate through the medium of the circulation;

3, by whatever may excite mechanically the cutaneous capillaries.

VARIETIES.

Feeling.—To feel is amiable; but to feel too keenly is injurious both to mind and body; and a habit of giving way to sensibility, which we should endeavour to regulate, though not eradicate, may end in a morbid weakness of mind, which may appear to romantic persons very gentle and very interesting, but will undoubtedly render its victims very useless in society. Our feelings were given us to excite to action; and when they end in themselves, they are impressed to no good purpose that I know of. This is the chief reason why novels are so dangerous to young persons. My dear daughter will be persuaded that I say this from motives of the tenderest affection to her, and because I would have her not stifle the good and amiable emotions of her heart, but direct them rightly. I would not have my child become one of those of whom it may be said that they feel, and only feel. It is the most absurd and useless of all characters.—*Bishop Sandford.*

Parsnips for Milch Cows.—When parsnips are given to milch cows with a little hay, in the winter season, the butter is found to be of as fine a colour and excellent flavour as when the animals are feeding in the best pastures. As parsnips contain six per cent. more mucilage than

carrots, the difference may be sufficient to account for the superior fattening as well as butter-making quality of the parsnips. The result of experiment has shown, that not only in neat cattle, but in the fattening of hogs and poultry, the animals become fat much sooner, and are more healthy than when fed with any other root or vegetable. They should be given to cattle in the proportion of about thirty pounds' weight morning, noon and night; the large ones being split into three or four pieces, and a little hay supplied in the intervals of these periods.

Silk Cultivation in Lombardy.—The silkworm is a caterpillar which, after gorging itself during the finest part of the summer on the leaves of the mulberry-tree, climbs, in its natural state, into the branches, and there weaves round itself, and from itself, a cover which, when completed, is about the size and shape of a pigeon's egg, compressed in the middle. Within this shell, as it may be termed, it remains dormant in the state of chrysalis during the winter, and eats itself out as a butterfly when the warm weather returns, when, after depositing an innumerable quantity of eggs, a few days terminate its existence. There is not much here, one would think, to originate an important trade, and yet the ingenuity of man has turned the habits and instincts of this apparently insignificant worm to astonishing results. After weaving themselves into their winter cover, the worms which are kept for breeding are carefully protected during the winter, and, as soon as the eggs are laid in spring, these are placed on tables in large rooms, where they soon change into minute worms, not thicker than a thread. To these worms the tender mulberry-leaf is supplied, and for forty days during May and June they are constantly fed upon it. The great art is to preserve an airy atmosphere of the most uniform temperature and a full supply of fresh mulberry-leaves. By the end of the feeding time all the mulberry-trees in the country are stripped of their first leaves, and the thread-like worm has grown nearly as thick as the top of one's little finger. He has now gorged himself, and is approaching his destiny. Branches of trees are placed about the room, into which he climbs and begins to weave himself into his tomb. When that is accomplished, the living but dormant animal is completely encased in its cover, called the cocoon. In this state these form an article of commerce, and are sold to the manufacturers in the towns and villages, where the rest of the process is completed. That process is nothing more than to unwind by art the silken cover within which the worm is encased. For this purpose a handful of cocoons at a time are thrown into warm water and kept in constant motion by a brush, which detaches the ends of slight silken threads, several of which are spun off together round a wheel, and in one minute the cocoon is unwound, and the dead worm inside is brushed away. The silken coat with which he had so carefully covered himself is thus transformed into the fabric from which is fashioned the silken dress of a lady, and which engages so large a portion of the manufacturing industry and capital of Italy and France. It is a trade which is constantly increasing, as the land within the range of the climate in which it can be followed is extensive, and not yet nearly occupied. In Italy it yields an annual value estimated at upwards of £10,000,000 sterling.

Airy Costumes.—Are the children to be frozen this winter, I want to know? Are their legs to be bared from the knee to the tip of their little white socks, just above the ankle, to please some foolish mother, who would rather her child were a martyr to neuralgia and rheumatism its natural life than to be out of fashion? Are sneezing babes to face the winter wind in embroidered muslin caps, lined with silk, the costly lace borders of which are supposed to atone for the premature loss of their eyesight? Are little girls to shiver in cambric pantalettes, and skirts lifted high in the air by infantile hoops? Are their mothers to tiptoe through the streets in paper-soled boots and rose-coloured silk stockings? And yet one scarcely cares about the latter, because the sooner such "mothers of families" tiptoe themselves into their graves, the better for coming generations; but for the children, one can but sigh, and shiver too; and inquire, as did an old-fashioned physician of a little, undressed victim, "If cloth was so dear that her mother could not afford to cover her knees?" It is a comfort to look at the men, who, whatever follies they may be guilty of (and no human arithmetic can compute them), have yet sense enough to wear thick-soled boots and wadded wrappers in the proper season. One looks at their comfortable garments and heaves a sigh for breeze and mud-defying pantaloondom; for with the most sensible arrangements for skirts they are an unabated and intolerable nuisance in walking; and yet those horrid Bloomers! those neutral, yet "strong-minded" Miss Nancys! with their baggy stuff-trowsers, flapping fly-aways, and corkscrew stringlets. I *could* get up a costume! but, alas! the brass necessary to wear it! I see now, with my mind's eye, the jaunty little cap, the well-fitting, graceful pants, the half-jacket, half-blouse—the snow-white collar and pretty fancy necktie—the ravishing boot—the nicely fitting wristband, with its gold sleeve-buttons; but why awake the jealousy of the other "sect?" Why drive the tailors to commit suicide in the midst of their well-stocked warehouses? Why send little boys grinning round corners? Why make the parson forget his prayers, and the lawyer his clients? Why drive distracted the feminine owners of big feet and thick ankles? Why force women to mend the holes in the heels of their stockings? Why leave to scavengers the pleasant task of mopping up dirty streets and pavements? Why drive "M.D.'s" to abandon their profession, and take up "de shovel and de hoe?" I'll be magnanimous. I won't do it.—Fanny Fern.

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THE RETROSPECT.

Another year has now nearly rolled away. It becomes every man to reflect on the past. The future is hidden and unknown, but the past has exhibited events which few persons expected and none distinctly knew. It has been a year when the average mortality of the country has been lower than many preceding years; and yet some apparently robust and healthy have been suddenly cut down. The progress of medical reform, like that of all other reforms, has been very slow, yet it has been making advances and promises greater triumphs still. We are fully satisfied that every contribution made to science enhances the progress of Medical Botany. The return of Dr. Livingston from Central Africa is an occurrence which will contribute much to the knowledge of Botanic Medicine. He had not with him the cumbersome medicine-chest of the allopath, with its calomel, its antimony, and its other deadly minerals; but he had a much more spacious and efficient pharmacopœia in the productions of nature around him. And whenever he was overcome for a time by the *malaria* of any part of the desert, he found that nature had prepared the remedy for his disease. Among other interesting facts which he has already related, is that which refers to fever; for, he says, in those localities where low fevers abound, there are found in the greatest abundance the trees of the cinchona officinalis class, the trees from which the Peruvian bark and quinine are obtained. This is a fact in harmony with many others, illustrating the wisdom and goodness of the great Creator, who permits no disease or malady without providing an appropriate and efficient antidote. The cattle of the field and the forest are endowed with an instinct to select and use these remedies, while man, in the excess of his vanity, neglects the real and the easily attainable medicines for the fabulous and difficult nostrums of human invention. We anticipate a very large accession of practical knowledge from the indefatigable traveller to whom we have referred; for, after sixteen years' absence, spent chiefly in that portion of the globe, where civilisation has produced none of its damaging effects upon the simplicity and teachableness of human nature, and having twice or thrice been in perilous circumstances from the effects of disease, and recovered with the assistance of indigenous vegetable productions, we may fairly calculate upon disclosures, which may be at variance with the dogmas of a certain medical school, but which will commend the practice which relies on herbs, bark, flowers, and roots, for success in its attempts to cure any disease. The return of Dr. Livingston to this country is an event, in the present year, which is likely to create a new era in Botanic Medicine, or, at least, to give a fresh impulse to its practice. Among the transactions of the Society of Arts, there are several experiments which exemplify the medicinal properties of vegetable productions and their adaptation to alleviate some of the maladies and to cure others to which man is heir. As a result of these experiments, we

know that there are some men who occupy a high place in the estimation of their countrymen, who have resolved to abandon the use of mineral medicines.

During the past year the government of the country have been so absorbed in business connected with foreign affairs, as to leave them but little time to attend to home matters. Many bills relating to reforms are held in abeyance; the Medical Reform Bill is among the number. The Compulsory Vaccination Bill, though intended, according to its original provisions, to come into force in January, 1857, is, however, incumbered with some difficulties which act as a temporary check. It is believed in some quarters that the voice of the country will prevent it from ever becoming the law of the land. The present state of the question demands the utmost vigilance and decided opposition of the intelligent public to prevent a most intolerable encroachment on the sacredness of the homes of Englishmen. There is a necessity for the people to be constantly on the *qui vive* to protect themselves and their liberties against the cupidity and avarice of a certain monopoly which has already received a larger amount of government patronage than it has ever merited, and more than is consistent with that amount of freedom to which every Briton is entitled. There is among the friends of Medical Botany a nucleus around which there should be a great gathering to resist all the selfish movements of those who would have the strong arm of the law to uphold their monopoly, to the prejudice of all science and experience.

The establishment of a Botanic Hospital has long been contemplated, and it would no doubt prove of great benefit to the community, and contribute largely to the progress and practice of Medical Botany in this country. Special efforts in this direction have been made during the past year. Among these we may notice the bazaar and soirée at Sheffield; at the latter Dr. COFFIN attended and was well received. Though the result of these efforts in a pecuniary point were gratifying, yet it is not upon such spasmodic efforts that the project must depend for its completion. There must be a general, systematic, continuous, and persevering attempt, or the object proposed will never be attained. We speak thus boldly that our readers may seriously consider the subject, and begin the new year with exertions commensurate with the greatness of the work. While we write thus, we are aware that this year has been one of unparalleled pecuniary difficulty, arising in some measure from the burden of the income-tax, the high prices of all articles of household consumption, and also from the numerous instances of defalcation in public companies, where many had invested a portion of their hard earnings. This has had an effect on the pecuniary condition of the people, greatly beyond the parties immediately connected with the corporations to which reference is made. For instance, a tradesman who had deposited the sum of £150 in the British Bank, depended on it to meet bills not yet due; but when they become due, he is obliged to write urgently to his customers to pay their accounts as early as possible, and thus to drain the resources of many who calculated on a few months' credit. This has acted powerfully in retarding the progress of all benevolent enterprise, and damaged the progress of the Botanic Hospital.

COMPULSORY VACCINATION.

(Continued from page 209.)

VACCINATION is objected to as the source of other diseases than vaccinia or cowpox; these diseases being permanent, and consequently hereditary and deteriorative of the general public health. The holders of this opinion find its confirmation in a comparison of the mortality of this country, where vaccination has been voluntary, with that of a country where it has been for many years rigidly enforced. For instance, "in Austria, if it be known to the police that a person is unvaccinated, they have authority to take him forthwith, and see that the operation is performed."

The French official returns relating to the conscription show a deterioration in the following manner:—"Of the conscripts for the seven years 1831 to 1837, 459,000 were exempted as infirm, and 504,000 recognised as serviceable. For the seven years 1839 to 1845, 491,000 were exempted, and 486,000 only declared capable of service. Thus, in the first

period, out of 100 conscripts forty-five were infirm, or dwarfs; in the second, fifty were in that sad position."

The cause of this spreading debility, and its intimate connection with vaccination, may be seen by the subjoined testimony of medical men.

Dr. Shew (American) writes,—"It is maintained that vaccination, while it affords a good degree of protection from variola, yet renders the system more liable to other diseases. It is affirmed, also, that other diseases are introduced into the system at the same time with the cowpox. Long-continued and troublesome skin diseases appear to follow it, and, in not a few cases, the child seems never to enjoy good health after it has been performed." In another place:—"By questioning closely, we not unfrequently find that children never enjoy good health after vaccination, however firm it might have been before." Again: "I have been for years so much a disbeliever in vaccination that I would not be willing to have it practised upon a child of my own. I did not, however, know that there was high authority, even among the profession, for doubting the utility of the practice, till the winter of 1850-51. At this time, Professor Bartlett, a very candid and able man, and lecturer at that time on the Theory and Practice of Medicine in the University of New York, quoted, in his remarks on the causes of pulmonary consumption, on the authority of two French writers, Barthez and Rilliett, the following facts in regard to vaccination. In 208 children that had been vaccinated, 138 died of tubercular consumption, and seventy of other maladies. In ninety-five that were not vaccinated, thirty only died of tubercular consumption, and sixty-five of other diseases. The circumstances connected with the two classes, the vaccinated and the unvaccinated, were as nearly as could be the same."

The editor of the *Medical Times* writes, respecting the mortality in Glasgow, in 1853:—

"Among the diseases affecting the adult population the tubercular will be found, as usual, to have been the most fatal. *By consumption alone there were* 2,490 *persons carried off. This distemper has greatly increased during the last* 60 *years.* In 1775, the population, of Glasgow amounted to 43,000; the deaths by phthisis were only 161, or affecting one out of every 269 of the inhabitants; whereas, in 1853, there have died of consumption one in every 158."

Dr. Trall (American) writes:—

"Physicians are not at all agreed as to the propriety of resorting to vaccination, as a protection from smallpox. . . . There is no question that it is, to a great extent, a protection from the virulence and danger of the natural smallpox; at the same time there is danger of inoculating the patient with some loathsome, and even worse disease, as ——, or scrofula, from the impossibility of always getting a supply of matter from healthy constitutions. In either way there is a risk to incur, and it is a delicate matter for a physician to advise on a subject when both sides are hazardous. I am fully convinced that, if people could bring up their children in strict physiological habits, the non-vaccinating plan would be altogether the best. Children reared healthily in relation to food, exercise, and ventilation, have little to fear from any disease, however contagious; they may have this (smallpox), but it will not endanger life, nor produce much deformity nor serious injury. I have seen, within the last year, a most horridly loathsome case of scrofulous disease, in which the patient *literally rotted alive* at the age of fifteen, from *unhealthy virus* received when he was about three years of age."

Dr. Lutze (of Anhalt) cites the experience of Rublack, Reil, Schœnlein, Evertzen, Nittinger, Ferguson, and Raspail German and French physicians, in support of the proposition that "vaccine lymph is not merely a vehicle of contagion for Cowpox, but that it propagates ringworm, itch, scrofula, and s——."

Dr. Verdé-Delisle (French) after quoting facts and statistics, almost to tedium, concludes thus:—

"Now, let us reckon with vaccination. What service has it rendered humanity? It has shackled the organic functions, it has suppressed the vital force, it has infinitely multiplied the most terrible maladies, pulmonary consumption, scrofula, cancer, insanity, rickets, paralysis. It has even given birth to croup, and, more particularly, to *internal* variola, called typhus fever, which is now more common than eruptive smallpox. Thus, out of a vigorous and powerful nature, it has made the miserable race you see. In a word, it has deranged the mental faculties, corroded the lungs, ulcerated the intestines; it has done all that, and *yet*—it has not preserved us from smallpox."

Dr. Newman (English) writes:—

"It is of the utmost consequence that the child from whom the infectious matter is communicated be perfectly healthy, and have no inherent taint of constitution; for experience has taught us that the most terrible disorders have been communicated to healthy children from being vaccinated with lymph contaminated with ——, herpes, scrofula, &c., which injurious con-

sequences might have been prevented by taking proper precaution that the matter was pure and unvitiated."

Mr. Borham writes to Lord Lyttleton:—

"Cambridge-terrace, Hyde-park, July 17th, 1855.

"My Lord,—The amendment of your Vaccination Act has been so unostentatiously and speedily hurried through the Upper House, that the profession had not an opportunity of knowing the amendments you have made, or expressing an opinion thereon. . . . .

"I think, my lord, that every medical man ought to vaccinate those children that he has brought into the world—for many obvious reasons, it would make the object more complete. He can do so by your recent amendment; but the slight remuneration of one shilling will deter many from accepting it, and thus it will rather tend to the dissemination of other diseases *equally or more frightful than the smallpox*. To make this clear to you, I will illustrate it by cases that have fallen under my own observation, and *these are legion*—viz., many children are born apparently healthy, and seemingly remain so for two or three months, when an eruption breaks out upon the region of the anus, precluded from observation by the apparel, but the face and arms appear quite healthy. The district vaccinator is deceived by the appearance of these children; they are vaccinated, fine pustules are produced, and this vitiated virus is transmitted to scores of others, who shortly after suffer from fulsome eruptions, or *the foundation is laid for scrofula or tuberculous consumption*. These children have been born of parents who were either suffering from primary or secondary —— during utero-gestation; and this frightful disease, after the birth of the child, either lies dormant, or slightly shows itself about the third month, the time for vaccination. Such diseases are *most likely* to be known by the medical attendant of the family, and I humbly submit it is a strong reason for the remunerating fee to be sufficiently large to induce him to vaccinate those he attends, so that such diseases may have *less chance* of being propagated."

Trying to the patience, doubtless, is the necessity of wading through these details; but justice to the subject must be done. The words of two more witnesses shall conclude this portion of the case.

In the course of a debate on the "Vaccination Extension Act Amendment Bill," Dr. W. Michell, M.P., "denied that vaccination was any preventative of smallpox, and (affirmed that it) was often the cause of blindness and scrofula."

Mr. Brady, M.P., remarked, when the annual grant of £2,000 to the National Vaccine Establishment was last voted, that "at the present time the operator *had not the means of knowing* with certainty whether what he used was the true vaccine lymph; and many cases had come within his (the hon. member's) knowledge, in which children had imbibed loathsome, and even *mortal*, diseases from having been inoculated from unhealthy persons."

Here are two declarations of experience which exactly coincide; yet, while Dr. Michell justly considers that the facts are conclusive, not only against compulsion, but against vaccination altogether, Dr. Brady advances his statement as a reason for the employment of *more skilful* vaccinators. The absurdity of such argument is easily demonstrated; for, let the *most skilful* vaccinator have a charge of lymph placed before him, and though he study from that moment through all time, he cannot, without experiment (and in experiment lies all the danger) determine whether it be a most deadly *virus*, or simply a little harmless *pus*. Medical gentlemen grow eloquent in descanting on the absurdities of homœopathy, but, compared with this, the whole heap of infinitesimal extravagance is like a mere ant-hill at the foot of the monarch of the Alps.

(To be continued.)

PLANTS OF THE SUB-TROPICAL ZONE.

The mango *(mangifera Indica)* produces a fruit as highly valued in very warm climates as the peach is in England. The *palma Christi*, or castor oil plant *(ricinus communis)*, is cultivated extensively in the East Indies, United States, and West Indies, for the sake of the oil obtained from its seeds (castor oil), which is so largely used in medicine. It attains in its native climate the height of a tree, though in this country it can only be grown as an annual, three or four feet high. It is of very rapid growth, and is now generally supposed to be the plant which our translators have rendered "a gourd," which "came up in a night, and perished in a night," for the comfort and the instruction of Jonah; though so rapid a growth as this must have been miraculous. The fathers, Jerome and Augustine, differed so much as to the particular plant intended by this gourd that we are told, from words they proceeded to blows.

Some of the grasses of India are very fragrant. One *(andropogon schœnan-*

thus) is called the lemon grass, and yields a perfume very much like the lemon plant, or verbena *(aloysia citriodora)*, which is often cultivated in our gardens and cottage windows. The essential oil distilled from it is imported into this country, and used in perfumery. Another species of the same genus *(andropogon calamus aromaticus)* is considered to be identical with the calamus of Dioscorides, and also with the "sweet calamus," which was one of the ingredients in the "holy anointing oil of the sanctuary," Exod., xxx, 23. The same plant is mentioned in Isa. xliii, 24, "Thou hast bought me no sweet cane with money," alluding to its use in the temple service; and again, in Jer. vi, 20, "To what purpose cometh there to me incense from Sheba, and the sweet cane from a far country?" This plant, and another allied species *(andropogon Iwarancusa)*, cover the extensive arid plains of central India. The oil is considered very precious by the natives, who use it as a valuable external remedy; and an infusion of the plant is considered a powerful medicine in all kinds of fever. The oil is obtained by distillation, from the flowering spikes, but in the season and in the places where the plant grows, the jungle fever is so very prevalent, that the health and lives of those who collect it are in great danger, and, in consequence, the oil bears a very high price. The greater part of the oil produced is sent now, as in ancient times, as an article of commerce to Arabia. The oil is so highly fragrant, that insects will not approach it, and the odour of the plant itself is so powerful, that though camels will eat almost any vegetable, yet they will not browse on this.

The spikenard of the ancients has been considered by some to have been this plant; the oil of which was thought to be the "ointment (more properly "attar," or essential oil) of spikenard, very costly," mentioned in Mark xiv, 3; but the researches of Sir William Jones seem to show, that a plant of the valerian tribe *(nardostachys jatamansi)*, called by the natives "jatamansi," and by the Arabians "sumbul," was the true spikenard. It grows plentifully all along the Himalayan Mountains, in Nepaul, Bengal, Delhi, Deccan, &c., and is not very unlike in appearance some of the small "forget-me-nots" of our native land. Its attar, or essential oil, forms a principal ingredient in the rich essences and perfumes of the Hindoos, of which the orientals are proverbially fond. They anoint their persons and perfume their clothes with them. Various kinds of these essences were articles of commerce in very ancient times, such as those of roses, cetaca, or pandanus, aguru, or aloes-wood, &c.; being imported by the Arabians from India, and by them carried to Rome, Greece, Judæa, &c., where they bore very high prices; the small box (or rather flask) of spikenard, mentioned above, being worth more than £9 : 7 : 6 of our money. The spikenard *(jatamansi)* is still highly esteemed in India, and is annually brought down from the Himalayas in large quantities.

One of the most valuable productions of India is the cotton, of which at least five or six species are natives of India, yielding cotton of various degrees of value. Of all these, however, *gossypium herbaceum* is the most generally cultivated throughout the world. It is a native of India, Africa, and Syria; but is extensively cultivated in India, Asia Minor, Egypt, Syria, Greece, Sicily, Italy, Malta, the south of Spain, North America, etc. Some other species are cultivated in particular places, as *gossypium Nanking*, in China and the South Sea Islands, from which the fabric called "Nankeen" is made. *Gossypium religiosum* is cultivated in Sicily and Greece; *G. vitifolium*, around Cairo, at Rio Janeiro, and the West Indies; and *G. Barbadense*, in Barbadoes, and generally throughout the West Indies. Cotton succeeds in those countries whose mean temperature is between 61° and 63° Fahr. In some places, as in the Crimea, it ascends to 45° N. lat.; in Asia, even to Astrakhan; in North America, as far as 40° N. lat.; in South America to 30° s. lat. on the eastern coast, and even as far 33° on the western. The Cape of Good Hope and Australia are the most southerly stations for it. In China and Japan, cotton-culture is in a flourishing condition; but the supply is not equal to the demand, and immense quanties are exported from the East Indies to China.

The cotton plants are sown in March, and, when finally thinned, they are left at from three to six feet distance from each other. They will last twelve, fifteen, or even twenty years, and in many countries produce two crops every year. In some places, however, the cotton is treated as an annual. The best plants yield about two and a half pounds of clean cotton, the weakest only about five ounces. They require to be kept free from weeds, especially from the species of convolvulus, or ipomæa, which would speedily choke them, and, especially in Brazil, are very luxuriant. The collecting of the ripe cotton capsules is a very laborious work, and requires a great many hands in a large plantation; the harvest lasts for several weeks. The greatest difficulty is the separation of the cotton from the seeds; in America this is effected very completely and expeditiously by machinery, but in India by hand. Cotton appears to have been known to the ancients. Herodotus mentions cotton garments 445 years before the Christian era, and the Mexicans manufactured cotton cloth prior to the discovery of America. Its importation into Great Britain has increased with extraordinary rapidity of late years, and to an extent almost unexampled in the history of commerce. In the seventeenth century, the trifling supply required was obtained wholly from Smyrna and Cyprus. In the year 1786, about 20,000,000 pounds were imported. In 1838, the quantity was upwards of 500,000,000 pounds; and in 1848, the enormous quantity of 712,554,080 pounds were imported into this country; while the quantity of cotton manufactures exported in the year 1848, was of the value of £16,770,868; and of cotton spun into yarn, £5,927,956.

The quantity of cotton manufactures, exclusive of lace, patent net, sewing-thread, stockings, and other cotton goods not entered by the yard, included in the above amount, for 1848, was upwards of 1,046,000,000 of yards, which would reach to the moon and back again, and then leave enough to form a band almost all round the earth. These facts will give some faint idea of the vast extent and importance of this branch of our manufactures and commerce. Our principal supply of cotton is from America and Bengal; but the East Indies and Egypt also contribute greatly to the importation. A large portion of the textures manufactured from it is reconveyed to the countries which originally furnished it. When machinery was first introduced into the cotton manufacture, it was made capable of spinning one pound of cotton into yarn one hundred and sixty miles long, and a much greater degree of fineness may now be obtained. The hand-spinners and weavers in India far outdo machinery in the delicacy of their fabrics, some of their muslins being expressively termed "woven air;" but so great is the saving effected by machinery in the production of all other kinds of cotton fabrics, that a large portion of those used in India are exported from Britain, it being a saving of expense to cause the materials thus to undergo the double voyage, though labour in India is so extremely cheap.

The climate of the Himalayan Mountains, as, for instance, about Delhi, is in summer quite tropical, so that almost all the fruits of the equinoctial zone can be ripened there; while, in winter, the temperature is so low, that often old trees of the well-known tropical fruits perish. During the summer, which is there at the rainy season, there are cultivated in the province of Delhi, rice, indigo, cotton, maize or Indian corn, and some tropical kinds of grain, gourds, ginger, turmeric, etc. In the winter season the appearance of this district is totally different, for then the corn plants of the north are cultivated, such as wheat, barley, oats, millet; also, beans, vetches, coriander, caraway, flax, etc. On the eastern side of the Himalayan chain, in the subtropical part of China, and in the south of Japan, some important plants appear for the first time. Here, indeed, some plants of tropical climes extend much further north than in Europe, especially near the sea, as the palms, bananas, arborescent grasses, etc.

Several trees of the *anacardium* or cashew nut tribe, growing in Japan, China, Burmah, and India, yield a resinous juice, which is used in those countries as a varnish, and generally turns black. They are dangerous, however, to use, as the fumes are of so acrid a

nature, as to cause painful and even dangerous inflammation and swelling. Some constitutions are more susceptible of these effects than others. The valuable black hard varnish, called Japan lacquer, is obtained from *stagmaria verniciflua;* its resin is so extremely acrid, as to cause excoriations and blisters if applied to the skin; the people of Sumatra consider it dangerous to sit or sleep beneath the shade of the tree. According to Thunberg, it is also obtained from *rhus vernicifera*, which yields a very beautiful varnish, which will, when dry, bear the heat of boiling water without injury, but cracks and flies like glass if struck. The beautiful *glycine Sinensis*, with its myriad bunches of lovely blossoms, resembling laburnums, except in their rich lilac colour—the *olea fragrans*, the sweet-scented blossoms of which are mixed with the finer teas to give them flavour—the *thuja orientalis* (commonly called *lignum vitæ*), the Chinese chrysanthemum, which produces its richly beautiful blossoms of every shade of red, yellow, and white, after almost all our other flowers are past—and the China, or Banksian roses, which are so highly valued among florists, and the lovers of the garden—are all abundant in the Chinese provinces.

Here, also, are the camphor laurel, the aucuba, so frequent and beautiful an ornament of our gardens, the magnificent camellia, and the tea tree. The hydrangeas, so well known as garden flowers in England, inhabit marshes in China, and when cultivated here require large quantities of water. A full-sized one requires as much as ten or twelve gallons a day in warm weather.

THE WHOLESOME BEVERAGE OF THE PEOPLE.

In no country is there so much tea consumed as in Great Britain. It has for many years been imported from China; and for a long time it was supposed that it could be grown nowhere but in that country. Owing, however, to the spirit of enterprise, for which the present age is distinguished, it has been cultivated successfully in countries under the British government. But more particulars will be found in the following paragraps.

GROWING OUR OWN TEA.

In the year 1823, an adventurous British merchant, Mr. Robert Bruce, penetrated to the capital of Assam, at that time a province of the Birman Empire, and almost unknown to Europeans. The traveller's object was simply to barter his goods and to open up a new trade. Fortunately, however, he had also a taste for botany, and thus discovered that the tea-plant was indigenous to the country. He accordingly made an arrangement with a Singpho chief for a supply of young plants at his next visit. But it fell out otherwise. In the following year commenced the first Burmese war, in the course of which Mr. Bruce's brother commanded a small flotilla of gunboats. In this capacity he arrived at Sadiya and there, to his surprise, was shown the agreement entered into by his relative and the native chieftain, who subsequently furnished him with several hundreds of plants.

No further steps appear to have been taken until 1832, when Mr. C. A. Bruce drew Lord William Bentinck's attention to the importance of this new opportunity for the employment of British capital and enterprise. But it needed the waste of yet two more years before official inertia could be so far overcome as to sanction the appointment of a committee for the purpose of introducing the culture of tea into the British dominions. The delay would no doubt have been still greater, had Assam been directly governed by the Crown. In that case, there is little likelihood that more would have been done to further this object than has been done to develop the resources of other colonies and dependencies. The commercial occupations and utilitarian habits of the majority of the East Indian Directors have rendered them peculiarly capable of judging of the merits of any scheme for the material improvement of the country placed under their control; and they have consequently been ever ready to afford all reasonable encouragement and assistance to useful and practical projects. Not many months after the appointment of the above-mentioned committee, Mr. C. A. Bruce was sent into Upper Assam to establish tea-nurseries and to superintend their management. So successful was the experi-

ment, that in 1839 two-thirds of the Government factories and plantations were taken up by the Assam Tea Company, which started with a capital of £500,000 in 10,000 shares of £50 each. This company already possesses above 3,000 acres in a high state of cultivation, and is only restrained from an indefinite increase by the difficulty of procuring labour. At first it was necessary to employ Chinese, as everything depends upon the delicacy of manipulations. The native Assamese, indeed, were easily instructed in the method of plucking the leaves, and were made serviceable in the humbler branches of the process of manufacture. But for some time it was found difficult to overcome their repugnance to letting themselves out, which they considered as derogating from their independent position as occupiers of land on their own account. This prejudice, however, is now gradually yielding to the temptation of certain and regular payments in actual money. Presuming on their importance, the Chinese displayed more than their characteristic insolence and insubordination, until their presence became intolerable, and their dismissal imperative. No inconvenience has thence arisen, their place being ably supplied by Europeans. But in spite of all the obstacles which impede a new enterprise, especially in the East, the produce has year by year steadily increased in quantity and improved in quality. The crop of the past season thus amounts to 558,628 lbs., or above 80,000 lbs. in excess of the crop of the previous year. Of green teas no great quantity has yet been made; but the genuine excellence of the black teas—such as Congou Souchong, Orange Pekoe, and Flowery Pekoe—has been acknowledged by even the somewhat severe tribunal of the Analytical Sanitary Commission. The result to the shareholders of the company is a dividend of seven per cent., which in succeeding years will be largely augmented, as the cultivation of the plant is extended, and the expenses proportionately diminished.

The finest tea districts in China lie between the 25th and 33d degrees of north latitude; in Assam between the 27th and 28th. In both countries it is found to thrive best on a light, porous, yellow loam, belonging to the clay-slate formation, and unfit for the production of cotton, tobacco, or sugar-cane, but not unsuitable for cereals. In Assam the tea-tracts are mostly situated in the plains, though on undulating slopes. "The plants seem to love and court moisture, not from stagnant pools, but running streams." In another place the writer quoted observes: "There should be plenty of water near the roots, but the plant should always be above inundation." He also speaks of it as being so hardy as to live in any soil, if kept in the shade after being transplanted until it has taken good root. Black and green teas are often gathered from the same bush; but the choicest green varieties are produced by superior culture and soil, and are influenced by the age of the leaves, as well as by being prepared after a peculiar method. There are usually three, occasionally four gatherings in the year. The earliest, which takes place in April, is the most highly esteemed, as it consists of the young leaf-buds while still covered with a whitish down. The second gathering comes off in the early part of June. The leaves are then of a dull green colour, and are plucked in great quantities; but are inferior in delicacy and aroma to those gathered in April. A third crop is obtained in July, when the leaves are dark green, and are ouly fit for making the coarser kinds of teas.

Mr. Bruce tells us, that "the sun has a material effect on the leaves; for, as soon as the trees that shade the plants are removed, the leaf, from a fine deep green, begins to turn into a yellowish colour, which it retains for some months; and then again gradually changes to a healthy green, but never becomes thicker; and the plant throws out far more numerous leaves than when in the shade. The more the leaves are plucked, the greater number of them are produced; if the leaves of the first crop were not gathered, you might look in vain for the leaves of the second crop. The tea made from the leaves in the shade is not nearly so good as that from leaves exposed to the sun; the leaves of plants in the sun are much earlier in season than of those in the shade; the leaves from the shady tracts give out a more watery liquid when rolled, and those from the sunny a more

glutinous substance. When the leaves of either are rolled on a sunny day, they emit less of this liquid than on a rainy day.

The Assamese are not equal to the Chinese in quickness of touch; and their plants are allowed to grow to double the height, which increases the fatigue of plucking. In China the plant seldom exceeds three feet, so that the gatherers pursue their calling while squatting down in their usual manner. But the Assamese has to stand up to his work. In the latter country Mr. Bruce fell in with some trees, in a wild state, three feet in circumference and fully sixty feet in height. Seedlings yield a small crop in the third year, but do not arrive at maturity under six years. The plant will live to the age of forty or fifty years. The green-tea Chinamen cut down their plants every ninth year, so as to have abundance of vigorous young shoots. The process of preparing the leaves for consumption has been too often told to need repetition in this place.

The similarity of temperature and of vegetable productions in the lower range of the Himalayas and in central China induced Dr. Royle to recommend the introduction of the tea-plant into the former locality. With its usual liberality, the Indian Government at once sanctioned the experiment; and a considerable number of young plants were accordingly imported from the southern parts of China, as being the most accessible. These, however, being found inferior to the teas grown in the interior, the Court of Directors sent out Mr. Fortune to obtain plants and implements, and even manufacturers, from the best districts of the celestial empire. That gentleman acquitted himself most successfully and satisfactorily; and under the superintendence of Dr. Jameson, the tea-plantations in the north-western provinces of India have become a permanent and profitable branch of the local agriculture. The principal Government plantations are situated in the Deyrah Dhoon, Eastern Guhrwal, and Kumaon. The Dhoon is a valley, sixty miles in length from east to west, and sixteen miles broad at the widest part. It lies between the Himalayas and the Sewalick range, in north latitude 30° 8′. In 1854, about 400 acres had been planted, of which only 150 were in a condition to make a return. These yielded between 10,000 lbs and 11,000 lbs of tea, or 70 lbs per acre; about 85 lbs of raw leaves, or 20 lbs of prepared tea, being obtained from 100 full-grown plants. According to Dr. Jameson, the Deyrah Dhoon is admirably adapted for the cultivation of the tea-plant. Grain crops are not remunerative, and the land at present lets for 1*s.* 9*d.* per acre. Labour is also cheap and abundant; both land and water carriage at hand; and no want of materials for manufacturing chests and implements, and for packing tea. At this plantation only black teas are prepared, which sell readily on the spot at prices varying from 1*s.* 3*d.* to 5*s.* per pound. The second-class teas are mostly purchased by natives, "partly for home consumption and partly for retail and barter with the Bhoteas, who visit the Bugaissur Fair in considerable numbers in the cold weather."

In Eastern Gurhwal, also in 1854, about 200 acres were devoted to the cultivation of the tea-plant, yielding 5,000 lbs of tea and 20,000 lbs. of seeds. The site of this plantation had been previously covered with a dense jungle of oak, rhododendron, &c., assessed to Gevernment at 2*l.* 8*s.* per annum. When properly cultivated, this land will give from 100 lbs. to 230 lbs. of tea per acre; and a vast tract may be turned to equally good account which at present is almost valueless. The Government nursery extends in terraces up the mountain, from an elevation of 4300 to that of 5,300 feet above the level of the sea. Only black teas have yet been manufactured in this locality, averaging 5*s.* 10*d.* per pound.

In Kumaon there are two Government plantations. The one at Hawulbaugh is situated on the banks of the Kosila, on gently undulating land 4500 feet above the sea. No more than 52 acres were under cultvation in 1854; but excellent land abounds on all sides. Both black and green teas are made here; some of the latter averaging 6*s.* 4*d.* per lb, and the former from 4*s.* 4*d.* to 5*s.* 10*d.* The Bheemtal plantation consisted of about 80 acres, 4000 feet above the sea-level,

producing the same teas, and commanding the same prices, as the preceding.

Tea-plantations have likewise been introduced into the Punjaub with every prospect of success, but too recently to afford any substantial data. Indeed, it is obvious that the Government has nowhere pretended to do more than facilitate private enterprise and speculation. It has borne the heat and burden of the day, and now invites its subjects to gather the fruits of its experience. Already several native landholders have been induced to engage in the cultivation of tea, and most of the local prejudices against its introduction have gradually disappeared. The advantages offered are such as none but a native would hesitate to accept with eager alacrity. The Government has guaranteed that "no tea-lands shall be assessed at a higher rate than those otherwise cultivated, and that the rate shall in no case exceed one rupee per acre." The profits, however, are enormously greater than those derived from any other article of argicultural produce; and as well-grown plants may be readily procured from the nurseries, no long delay need occur in realising the due reward of a judicious application of labour and capital. It is strange, however, that no Europeans have yet been tempted to embark on so certain and profitable a speculation. The temperature at the elevation of 4000 feet is delightful throughout the greater part of the year, and at no season oppressive. Nor is any large amount of capital required either for the cultivation of the plant, or the manufacture of the leaves.

"The tea-plant," says Dr. Jameson, "is now thriving over $4\frac{1}{2}°$ of latitude and 8° longitude; or from Hazarah in the west to the Kali Nuddi in Kumaon in the east, and from Deyrah Dhoon in the south to Ramaserai in the north, over a tract containing upwards of 30,000 square miles. In this mighty tract there is such a quantity of land fitted for tea-cultivation as, if so used, would not only produce teas capable of supplying the whole of India, but the whole European market. . . . . Nor is it necessary to occupy lands now used in growing the various kinds of grain. Let but the forest land and the waste land be employed, and from them alone will be produced a supply equal to the consumption of Europe." Hemp, a plant indigenous in the Himalaya, can also be cultivated to any extent in the same localities; though at present it is in no great demand.

A CUP OF COFFEE.

"What great effects from trivial causes spring!" How long had the white jasmine-like flowers bloomed unheeded in Abyssinian solitudes, and the rich red berries shed their twin beans upon the earth, before some speculative being ventured on the experiment of extracting the essence from the said beans, and was rewarded by drinking the first *cup of coffee!*—the first of a long, long line indeed. Who would have thought that the tree, with its pointed leaves, its snow-storm of blossoms, that comes in a single night, and thaws away in a day or two, to be succeeded by the cherry-like fruit—who could have imagined that this innocent, pastoral-looking tree was destined to exert an influence over the whole civilised world; that it would work a radical change in the staple diet of nations; that it would even bear its part in political convulsions, and assist at revolutions!

Long before it found its way into Europe, it had known an eventful and exciting career in Arabia, Persia, and Turkey. It had served to keep dervishes awake, and to act as a substitute for the forbidden wine to pious Mahometans, until its use had at one time to be solemnly prohibited by the mufti. But its European history began in 1615, when some Venetians brought it home with them from the Levant; in 1645 it appeared at Marseilles; and in 1650, Daniel Edwards, a Turkey merchant, introduced coffee into England; and his Greek servant Pasqua established the first London coffeehouse in George-yard, Lombard-street. At this time the price of the novel luxury was four and five guineas a pound, and a duty was soon levied upon the prepared beverage of fourpence per gallon.

English taste approved of coffee, and of coffeehouses. The latter increased and flourished, till in 1685, we are told, they might be considered as a most important political institution. Aided by Macaulay's graphic description, we can well imagine the scene presented by these places, whi-

ther "the Londoners flocked, as the Athenians of old flocked to the market-place, to hear whether there was any news." In those revolutionary days, when public meetings, newspapers, and all modern vents for inward agitation, were not, coffeehouse orators were sought after, and listened to with an avidity that soon caused them to become to 1685 something like the press in our own day. Great must have been the talking, speechifying, and plotting that went on under the guise of drinking coffee.

But we see it now-a-days under a happier and more peaceful aspect. There is an oriental association in its rich aroma. We see it served in jewelled cups to pashas meditative over the chibouque, or daintily tasted by the gaily-decked henna-stained beauties of the harem. Or, to come into the fresher air of Europe, in France, as we know, it is universally used; and even in England it is consumed to a large extent, though (especially by the poor) tea is held in greater favour. In Germany, the poorer classes seem to adhere to coffee with much the same tenacity that our own poor evince towards tea. The more their choice of food is limited by their means, the more do they insist on coffee forming part of the food. In the same way, we have all of us seen a poor half-starving woman, becoming possessed of a shilling, spend at least a third of her wealth in the purchase of an ounce or two of some vile compound which professes to be "tea." These inconsistencies are not limited to place. The German peasant, even with the lowest wages, has always a column in the book for coffee, and another for bread and potatoes. Probably almost as much is expended on the one as on the other.

The physiological effects of these drinks are generally ascribed to the presence of what is called caffeine in coffee, and theine in tea, which are identical properties, and which belong to the class of *organic bases*, which all have an action on the nervous system. If arranged in a series beginning with theine, the bodies at the end of the scale, strychnine and brucine, act as the most frightful poisons; while quinine, standing near the middle, is a highly valuable remedy.

Among the other properties of coffee must not be forgotten its powerful deodorising agency. We quote from Mr. Timbs's valuable little book—whose title, *Things not Generally Known*, is likely to become a misnomer, by the influence of the book itself in making them known—which tells us that coffee will instantly destroy the smell of putrefying meat, &c. To use coffee for disinfecting purposes, the raw beans should be pounded in a mortar, and the powder roasted over a moderately heated iron-plate until it is of a dark-brown tint; and then sprinkled about the place, or laid on a plate in the room that requires purification. Coffee-acid, or coffee-oil, it is added, acts more readily in minute quantities.

It should be remembered that coffee, *slightly roasted*, contains the maximum of aroma, weight, and nutrition. There can be no doubt that much depends on this previous preparation of the coffee-berry, and that many hundreds who are in the habit of daily partaking of this beverage are still unacquainted with its true flavour, and unbenefited by its best properties. The vapid taste of English coffee which foreigners complain of is probably owing to insufficient roasting. On the other hand, if the berries be subjected to an amount of heat beyond a certain point, the flavour is dissipated, and it becomes too bitter.

Coffee-roasting is, however, an operation which might easily be performed in every family. The Italians frequently roast small quantities in one of the thin oil-flasks, which accomplishes the work most effectively over a charcoal fire, the berries being frequently shaken during the process. The glass being a non-conductor, it is even thought a better material for the purpose than the generally used metal. It is not so liable to burn, and the progress of the roasting can be more easily watched.

A hollow cylinder made of sheet iron is, however, the usual form of coffee-roaster. This should be never more than one-third filled with the berries; for in the process of roasting, the bulk of the coffee is nearly doubled, and unless there is plenty of space left, it will be impossible for the coffee to be turned about easily, so as to insure that every part is equally exposed to the heat. This vessel

is kept turning over a brisk fire till the berries are of a deep-cinnamon colour, and of an oily appearance; and then it is taken from the fire, shaken, and left to cool.

Almost every family grind, if they do not roast, their coffee. By roasting it, they will assuredly advance many steps nearer the pure standard of perfection which we hear of in almost every other coffee-drinking country than our own. The purer it is, the wholesomer, and the more nutritious. In fact, in this, as in every other thing, it is necessary to bear in mind that what is worth doing at all, is worth doing thoroughly—an admirable maxim, whether applied to the building a Menai bridge or the making of a cup of coffee.

A CHILD POISONED BY SYRUP OF POPPIES.

On Wednesday night Mr. Bedford held an inquest at the Fountain Tavern, New-street, Golden-square, on Avies Catherine Bradley, aged seven weeks, who, it was alleged, had been killed by an overdose of syrup of poppies, administered by its mother. Avies Bradley, the mother of the deceased, stated, that as her infant suffered under a cold, she was advised to buy a pennyworth of syrup of poppies, and, after diluting it in spring water, to give it to the child when it was troublesome. She accordingly went to a chemist's shop and purchased the quantity recommended, which she mixed with water, and gave it to her infant in a teaspoon from time to time. The deceased fell into a stupor; and upon her informing her husband that she had given the child syrup of poppies, he exclaimed, "Then you have killed it!" She at once took the deceased to Dr. Pierpoint, but it died on the following day. The coroner said, he hoped that before long the sale of syrup of poppies would be put a stop to, as it was nothing but a poison in disguise. The ury returned a verdict, that "the deceased died rom the effects of spirit of poppies, administered to her by her mother through ignorance."

Of the few moments which are left in our disposal, it may reasonably be expected, that we should be so frugal, as to let none of them slip from us without some equivalent: and perhaps it might be found, that as the earth, however straitened by rocks and waters, is capable of producing more than all its inhabitants are able to consume, our lives, though much contracted by incidental distraction, would yet afford us a large space vacant to the exercise of reason and virtue; that we want not time, but diligence, for great performances; and that we squander much of our allowances, even while we think it sparing and insufficient.

NOTICES.

Mrs. H.—The person you speak of, "Mrs. Mansfield," has no connection with me, nor with the system of Medical Botany which I have introduced and carried out in this country; nor is she in any way approved of by me or under my sanction. A. I. Coffin, M.D.

24, *Montague-place, Russell-square.*

Dr. Coffin will commence a course of Twelve Lectures on Medical Botany, at Sussex Hall, Leadenhall-street, on Monday, January 12, 1857, at eight o'clock; and will continue them on each succeeding Monday, till the end of the course.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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COFFIN'S
BOTANICAL JOURNAL
AND
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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE NEW YEAR.

The present season is the time for reflections and for resolutions. With a new year the errors of the past are detected, and resolves are formed to "turn over a new leaf." The past has been instructing to all who are willing to learn. Never has any year in the history of this country been so remarkable for crimes against life and property as the last. The Rugely cases of poisoning have shown the evil consequences of having destructive drugs at the command of the faculty, and available to any of the community. Many other fatal cases have appeared in the public journals, some of them exhibiting how human life is jeopardised by the carelessness or incompetence of druggists and their assistants, and others, proving that an urgent necessity exists for the civil authority to interpose, to prevent the indiscriminate sale of poisonous drugs. Now any person, under a fit of disappointment, rage, or any other violent excitement, can go to a druggist and obtain the means of self-destruction, or can, with comparative impunity, procure a mixture for the destruction of the life of some other person whose existence is deemed an inconvenience which must be removed. And the *mistake* of the druggist's apprentice or assistant is supposed to be the scapegoat for the murderer. Crime has been heaped upon crime through the facilities afforded by these deadly medicines. The seducer first ruins his victim, and then, to hide his crime and her shame, he advises a medicine on the pretext that it will produce abortion, and he thus imagines he shall escape detection. And he too frequently succeeds. These remarks are not unfounded conjectures or wild fancies. Unhappily there are many cases come to light which awaken these suspicions, and there are many more which pass away without any notice whatever. We have selected two cases out of a large number before us.

Poisoning by Mistake.—On Tuesday morning an inquiry, which lasted several hours, was proceeded with before the coroner for West Middlesex, at Brompton, respecting the death of Mr. William Marcooly, a master tailor, who died on Saturday morning last, shortly after taking a dose of castor oil, or what had been sold as castor oil at the shop of Mr. Budd, a chemist, residing a few doors from his house. It appeared, from the evidence of Jane Beer, a servant girl, that she lived with the family of the deceased, and on the morning in question her mistress told her to send for three pennyworth of castor oil. She washed out a small phial that had previously contained medicine, some of which the deceased had used, and gave it quite clean and dry to the errand boy, Thomas Janson. Upon his return the bottle was taken up stairs to her master. In a few minutes afterwards witness heard a scream and ran up stairs, when she found her master lying on the floor. Medical assistance was immediately sent for, and Mr. Christian and Mr. Pollard, surgeons, came, but her master died in half an hour. Mrs. Marcooly told her that he had been poisoned by the castor oil. She was certain the bottle was clean and dry when the errand boy took it away. The quantity of castor oil her mistress told her to send for was one ounce, and she told the boy so. Thomas Janson, the boy, deposed to taking the bottle, and going to the shop of Mr. Budd, a druggist, a few doors from his master's, and adjoining Brompton-square; he saw the assistant, who was serving another boy. He served witness from a bottle on the shelf, at the back of the shop, and also from one on the left-hand side going in. He brought it home. What he asked for was an ounce of castor oil. There was nothing in the bottle when he took it, as he saw his fellow servant, Jane Beer, wash it out in the kitchen. Dr.

Cahill, a medical gentleman, residing in St. Michael's-place, was called in, and found the deceased insensible. Mrs. Marcooly said that he had been taking castor oil, and pointed to the bottle, which was lying on the table. Mr. Marcooly expired in about thirty minutes, and Dr. Cahill subsequently made a *post-mortem* examination of the body, and was quite satisfied that death had been caused by hydrocyanic acid, although a small quantity. Some of the poison still remained in the bottle, which he had sealed up and taken possession of at the time. After some further evidence the coroner and jury adjourned to Mr. Budd's shop, where the court was re-opened, and the boy Janson pointed to the place from where the assistant took the bottles. The witness also stated that the assistant put his hand for something in a cupboard on the left-hand side. In answer to the coroner, Mr. Budd stated it was in that cupboard where all the poisons were kept labelled, and he showed them to the jury. A reference to the prescription-book showed that hydrocyanic acid formed part of a prescription which was being made up for "the other boy" at the time Janson entered the shop for his castor oil, when the assistant at once came forward to serve him. This discovery entirely altered the complexiou of the case, and the coroner having remarked to that effect, an adjournment took place to a future day, for the purpose of obtaining further information.

Poisoning by Strychnine.—Mr. Wakley concluded yesterday at the Elephant and Castle, King's-road, Camden-town, an important adjourned inquiry respecting the death of Catherine Powell, a single woman, who poisoned herself by strychnine, on Monday, the 22nd instant. It appeared from the statement of deceased's father and mother, that she was at home on the previous Monday, and in her usual cheerful temper. She had gone to live as general servant with Mrs. Campbell, of 12, Harrington-square, and complained that the place was too hard for her, she being the only servant kept to attend upon a large family. On the day in question her mistress found her lying on her back in her bedroom apparently insensible. A medical man was immediately sent for, and upon his arrival he pronounced life to be quite extinct. In the deceased's box, which was unlocked, Mrs. Campbell found a small ounce-and-a-half phial, which Mr. Hazell, the surgeon, said contained strychnine. Mrs. Powell, the mother of the deceased, stated that her daughter used to talk about strychnine a good deal. She has never threatened or hinted about destroying herself, nor did her family know that she had such a dangerous ingredient in her possession. Mr. Hazell, a surgeon, described the body as being slightly discoloured, and that, contrary to the received impression, there was no tortuous rigidity in the muscles when he was called. The body was still warm, and the limbs were as flexible as in ordinary cases after death. The stomach was removed, and the contents analysed, when it was ascertained that she had swallowed the enormous quantity of 12 grains of strychnine. The coroner summed up at length, remarking upon the facility with which poisons could be obtained, and the consequent danger to the community, as had been too often shown. A verdict of suicide by strychnine, during a state of temporary insanity, was then returned.

In both these cases we think the investigation was very defective, but especially in reference to Catherine Powell. Was there no means of ascertaining how she came in possession of the bottle of strychnine? Had she no male acquaintance? Was no one accessory to procuring the strychnine? Is the cause assigned for her committing suicide a sufficient one? We think that these inquiries ought to have been pursued until satisfactory answers were obtained. More information we think might have been elicited. The former habits, health, mental tendencies, and companions of Catherine Powell ought to have been known. When the life of a human being is in question, the investigation cannot be too persevering and scrutinising.

The facts to which we have alluded, as well as those we have quoted, should act as powerful stimuli to all the students and friends of Medical Botany, to leave no means untried, to extend a knowledge of the great sanitary principles they have espoused. No argumentation is necessary to prove that, in exactly the same ratio as Botanic Medicine is understood, the probabilities of cases of poisoning will diminish. For it is one of the highest commendations of the Botanic System, that there is not a deadly poison to be found in the whole of its medicines. There never, therefore, has been a single instance of a person being poisoned by any mistake in putting up one of Dr. Coffin's prescriptions, or by one of his Agents giving one medicine for another. He is a benefactor to his fellow creatures who exerts himself to put down a system which has caused the death of thousands, and to build up and extend that system which can dispense healing and health to the nation. Medical Botany is not quackery: it is science in harmony with nature. It is a study of the diseases to which flesh is heir, combined with a knowledge of the remedies which the great pharmacopœia of the vegetable world contains. We therefore advise our readers to resolve, and to do two things in the new year on which they have entered: first, to

make themselves completely perfect in the science, which may be done by reading, practice and observation; and secondly, to make the science known in the whole circle of their acquaintance. If possible, let each reader resolve that he will introduce the system into one family before this year is at an end. Much can be done by individual exertion. Many mothers had now had their little ones growing up around them, instead of wasting in the cold grave, had they been acquainted with this system some years ago. And the writer of this paper has deeply to deplore the loss of those very dear to him, who, in all human probability, might have been shedding a cheering lustre on his home, had he been able to administer to them when first attacked with disease, and had they not been beyond his control, subjected to the injudicious treatment of allopaths. Sufferers alone can sympathise. Genuine sympathy will display itself not in useless regrets and sighs, but in endeavouring to prevent suffering. We hope these hints will be received and adopted, and then we calculate that Medical Botany will make more rapid progress in the year 1857 than in former ones. Let each man who knows these life-restoring remedies, feel that he is bound to make them known, and then great benefit will be secured to the suffering sons and daughters of humanity.

COMPULSORY VACCINATION.

(Concluded from page 220.)

THERE yet remains to be noticed a most serious and weighty objection to vaccination; viz., the extreme immediate danger attending the operation, though performed by the *most skilful* practitioner, with every possible precaution. That this danger is no mere phantom of diseased imagination is sufficiently and sorrowfully proved by the returns of the Registrar-General, thus:—

"In Bethnal-green, at 19, Warner-place South, on 15th July, the son of a cabinet-maker, aged seven months, died of *vaccination erysipelas.*"

"In Mile-end Town lower, the daughter of a gentleman, aged three months, died of 'erysipelas.' The medical man states that it supervened on vaccination."

"At the German Hospital, Dalston, both on 30th March, the son of a mariner, aged ten weeks, and the son of a sugar-baker, aged thirteen weeks, died of 'general erysipelas after vaccination, effusion on the brain.' The medical attendant adds, in his certificates, that 'both these children were vaccinated on the same day in Whitechapel-road, and were in the hospital two days.' *The cases appear to be such as demand investigation.*

"In Ratcliff, at 2, Devonport-street, on 6th April, the son of a coalmerchant, aged three months, died of 'erysipelas all over the body (one day), succeeding vaccination which was considered to be fine.'"

"Good God!" exclaims Dr. Johnson, of Brighton, as well he may, after the recital of such awful facts, "are these parents to have vaccination forced on their remaining children? See, the poor mother's tears are not yet dry, and her faded cheek has not regained its colour, when another child must perhaps, by this new act, follow its little fellow to a premature grave with no better comfort than that it died in innocence. Again the heart-rent mother will have to watch the first day's feverish excitement and the cold chills of the little one; again the loss of appetite and dull eyes, surrounded by its red network of blood; again see her child toss its tiny arms as the burning pain of that fiery demon, erysipelas, consumes and devours it. The blush of red once more announces, not that the mother has lost a child, but that, this time, she is childless. Thus for the young; but what must we say about the adult? must we behold strong, healthy men, that never knew sickness in their lives, brought suddenly to the bed of suffering and death for fear of an attack they never would be subject to? and many are the strong and vigorous men who have suddenly succumbed to an erysipelas that would have spared the more delicate and weakly. Is it consonant with our constitutional liberty thus compulsorily to endanger the lives of any one? Surely we must all have some relative, some aged and affectionate mother or sister whom we should hardly like to see subject even to the chance of such violence as erysipelas might inflict upon them. Oh! for Heaven's sake let us pause before we pass so infamous a bill. Let us think a little before we consign even a few among us to the chance of an early grave."

But Mr. Cowper seems determined to proceed; it therefore behoves us now to turn, with some sense of relief, from

the medical to the political portion of the subject, which need not long detain us.

It was not to be expected that the Act of 1853, so soon as its arbitrary character became known, should pass without protest. Accordingly we find one writing early in 1854 :—"The Compulsory Vaccination Act, while dishonouring science, invades in the most odious, tyrannical, and unexampled manner the liberty of the subject and the sanctity of home; unspeakably degrades the freeborn citizen, not only in depriving him of liberty of choice in a personal matter, but even in denying him the possession of reason; outrages some of the finest feelings and best affections of the human heart; sets at nought parental authority and responsibility, and coerces the parent either to violate his deliberate, cherished, and conscientious convictions, and even his religious scruples, or boldly to defy an unjust and tyrannous law."

About the same time the Committee of the Royal Jennerian Vaccine Institution published their Report for 1853, in which they denounce compulsion as a presumptuous interference with the inevitable progress of truth, and an unwarrantable aggression on the right of private judgment, directing especial attention to the introducer of the Bill thus:—"It seems strange that Lord Lyttelton, who parentaged the Vaccine Act of last session, should have acted so contrary to the teachings of his late chief, Sir Robert Peel. This great statesman, when it was proposed to make vaccination compulsory, as it is in some despotic countries, objected, remarking that such a proceeding would be so opposite to the mental habits of the British people, and the freedom of opinion in which they rightly gloried, that he could be no party to such compulsion."

A correspondent of the *Durham Chronicle* writes with reference to Mr. Brady's Bill, of last session, the remarks being equally applicable to Mr. Cowper's:—"The smallest probable cost of this 'system' of vaccination is £100,000 per annum. Now, for whose benefit is this large amount of public money to be expended?

"Certainly it is not for the benefit of those who believe in vaccination, since, for many years past, there has been no difficulty in getting the operation efficiently and cheaply, or even gratuitously, performed.

"Still more certainly it is not for the benefit of those who do *not* believe in vaccination, and who regard the *existing* act as an utterly abominable infringement on their rights as parents and as men.

"Let the question be repeated, For whose benefit is this large amount of money to be annually raised by fee or by fine?

"The answer is inevitable. There remain only the prospective recipients of the 'adequate remuneration' so carefully provided.

"To pronounce a sentence of condemnation on an entire class of one's fellow-countrymen is no pleasant task, more especially when that class consists of the members of a profession as arduous and as noble as any in civilised life; but, if these gentlemen, through indifference or apathy, in such a case verging upon criminality, continue to allow themselves to be represented by persons so ambitious, unscrupulous, and unreasoning, as the executive of the Epidemilogical Society, they must not be surprised should an injured and insulted people fail to draw nice distinctions between the active and passive promoters of a system of legislation opposed equally to the spirit of the constitution, the dictates of common sense, and the opinions of the most eminent of modern statesmen.

"What, then, shall they do to be saved? One course only seems to be open. Let them frankly and cordially unite with all their high-minded, right-hearted countrymen in such a public expression of opinion as shall effectually strengthen the hands of those members of the legislature who desire to preserve the dignity of British liberty, and enable them, not only to prevent the passage of the measure about to be brought forward, but to obtain the repeal of the arbitrary law which at present disgraces our statute book."

To disbelievers in vaccination another word need not be addressed: but I will suppose, sir, or madam, that you believe in vaccination, and will ask, What obstacle, removable by Act of Parliament,

has there been in the way of submitting your children to the operation? None whatever. In what way has the existing Act improved your condition in this respect? in what way will the proposed Act improve it? None whatever. Suppose, further, that a few medical men in London, self-appointed, and totally irresponsible, reported *against* vaccination and induced Government to interdict the practice under a considerable fine. What would you say to that? Would you not instantly assert your right of choice in a matter so purely personal? Most assuredly you would. Now this—this right of choice—is all that the objectors to compulsory vaccination contend for. Assist them, then—make common cause with them, and let there come from all parts of the country such an unanimous and decided expression of opinion as shall convince presumptuous zealots that the people will no longer submit to their dictatorial folly, and compel them to abandon the course of aggression which they have already too long pursued.

A HAPPY NEW YEAR.

We join in the general greeting of the season, and wish all our readers most heartily A HAPPY NEW YEAR. How many who give the greeting give along with it that which has made years of the past, that might have been happy ones, years of grief and wo, of misery and death! They wish a happy new year in giving and partaking of the cup which, ere the year close, may poison every spring of happiness, and turn every Elim into a Marah. "A happy new year," says the youth, and takes his glass; and his father and mother look on with no fear, and repeat the wish, by pledging him in return in the deceitful liquor. And before the year's end has come, that youth has pained his parents' hearts by incipient intemperance—in another year is an outcast—and in the third is in his grave. Friend joins friend on new year's day in the flowing bowl, and life and light and song are there; many a wish of a happy new year, and many a hope of frequent returns are uttered; and there a habit, which had been growing, has been encouraged; and the darkness of the drunkard's shadow has, ere the year's end, been hanging, like the pall of night, o'er the home in which so many glad hearts had beat. That friend has fallen, and that new year's drinking did it. He felt he was in danger, and he didn't like but to be social, and to do as others did. They mourn him now. Had they known the issue, strong drink had been banished from that new year's gathering.

And so on it goes, through the various ramifications of society—the wish sincere, but the mischief done. If any one into whose hands this falls has been in the way of so wishing a happy new year, let him withhold now, and give no countenance to that which has been the cause of misery unmitigated, and has led to a condition destructive of every ray of hope. We would not limit you in your kind desire, nor in the right expression of it; but, as you would keep yourself from danger, and would not set a snare for others, let not your cordial greeting give the intoxicating cup a shade of sanction, nor any one thereby an encouragement to quaff its dangerous draught. You can express your wish, and prove its cordiality, without the use of happiness-destroying drink.

Temperance friends, we wish you all "a happy new year." Our principles tend not to misery, but to happiness. Many a sorrowful home have they cheered. Many a desolate hearth have they planted round with happy hearts and smiling faces. Many a dwelling which was the abode of strife and wrangling, of bitterness, blasphemy, and brutality, have they transformed into a scene of love! where there is now heard the gleesome laugh of happy childhood, and where affection rules in word and deed. Like that blessed Gospel of which they are the offspring, or which rather includes them as a part of itself, they bless wherever they are embraced and carried out. Looking over the past, you have no need to grieve that you adopted them, and have sought their furtherance. From your adoption of them you know that this is a happier new year to you than otherwise it would have been; and from the thought of what you know has been the issue of your attempts to spread them amongst others, your heart is happier in the happi-

ness you have been the means of causing in their hearts. Many a deed has been done, during the year just closed, which comes up in remembrance to mar the happiness, as friends wish friends a happy new year; but amongst these there never appears even the shadow of abstinence from all that intoxicates, and the efforts put forth to induce others to abstain.

In wishing you a happy new year, we wish you it with the confidence that the principles which you have embraced, and are carrying out, are consistent with such a wish, and tend to its realisation. They have made the past year a happier one than it would have been. The same result will follow a similar course in 1857. And the more you exert yourselves to promote these principles, so much the more will happiness be the result. Our cause is a good one, our enemies themselves being judges. Its tendency is to do good. The furtherance of a cause good in itself, and that has such a tendency, is productive of happiness, and of the greater happiness the more that is done to advance it. In wishing you a happy new year, and a happier than the last, we have reference to *the means* as well as to the issue; and we press upon you in consequence to make this year more a year of temperance effort than any year that is past. The new year is naturally a time of reflection and anticipation. We naturally turn to the past, and as naturally look forward to the future. The lessons of the past should have an influence on the future. Those who have been labouring in this good cause, who have been throwing into it gift and service, have been sowing precious seed. That seed may not have yielded fruit in others as yet; but if it has not, it has yielded it in the happiness which the efforts for the cause and the giving for its advancement have brought with them. We only utter the convictions and experience of those who have been most active, and most laborious, and most generous, when we affirm, that there has been a fountain of happiness unsealed, and made to flow forth, which was worth vastly more than all that was done or given. We *have* results to rejoice in as regards others; but if we had not, there has been happiness in the ongoing; and in the desire that you, our abstaining friends, may have a happy new year, and a happier one than ever, we urge you to greater effort, and greater sacrifices for the promotion of the cause. We are satisfied that, even if you should not have an abundant harvest from the seed you sow in influencing others to the adoption of our principles, you will have it in your own bosoms—that you will be doing something to make this year a happy one. There is nothing more miserable than having nothing to do; and the most active and devoted and self-sacrificing are ever the happiest; and in this, as in every good cause, we have reason to believe that, if not weary in well doing, we shall, in due time, reap if we faint not. Let us then, abstaining friends, in wishing you a happy new year, join with our wish, and with a view to its realisation, a counsel to earnest effort, and liberal bestowment for our cause in this year on which you are now entering. The busier and the more benevolent you are in doing good so much the happier will you be.

But we wish a happy new year to all our readers who are not yet abstainers. In doing so, we wish them to join us, if it were for nothing else than that they may be saved the unhappiness of having countenanced any in customs which issue in intemperance. Many think not of the influence they are exerting. No idea of doing evil seems to enter their minds, although their example tends to encourage in the use of the drink those who are on the way to intemperance, or who, partaking, are certain to follow that course. Yet, with the light now shining, there does come to the hearts of many the thought of having been instrumental in leading on in such a path—and no wonder. And not unfrequently, when friends go astray, conscience calls to remembrance the part which friends have had in that, and there is a sting left behind which is never extracted, and a drop of bitterness which is never exhaled. We wish to save you from such unhappiness; and this can only certainly be accomplished by your abstaining from the drink yourselves.

This, however, is but the negative aspect, and there is a positive. In wishing you a happy new year, we do so

that you may have a share of the happiness there is to be had from the promotion of a cause which has done such good, and is fitted so much to remove altogether from amongst us one of the greatest sources of misery in the land. We can appeal to those of you who have been engaged in good-doing—although not in the temperance movement—as to the happiness to be had from such; and, as we do, we urge you to join with us in this, that is most certainly a way of doing good, that you may have still more a happy new year. We are not men of merely one idea, though we insist so much upon this subject. We are not ignorant of other modes of doing good. We can speak of them from experience. We find, however, that this intoxicating drink in its various forms—these drinking customs, with their sad results—interfere, on every hand, with our efforts for good. This is one of the great reasons why we set ourselves so strenuously to the furtherance of the temperance movement. And, for a similar reason, we urge you to act in a similar manner. You cannot be ignorant that strong drink and the drinking customs interfere with your efforts in good-doing. You have met them, we are confident, as we have done, opposing and neutralising much that otherwise would have been successful. By this your happiness has been lessened, if not altogether marred. We desire that you should have the full happiness to which your efforts would naturally give birth, if this did not prevent. Hence, when we wish you a happy new year, we press on you to cast in your lot with us—to lend us your aid in the removal of that which makes others so miserable, and hinders all, in your endeavours to lead them again to happiness. Our efforts have all tended in that direction. *They have helped yours* in the past, though you may not have been aware of it, or have failed to acknowledge it. They have added to your happiness, for they have saved you from the sorrow of having your labours of love rendered nugatory; they have helped to make them effectual, and thus, from them you have already reaped good in your own good-doing. Much will that happiness be increased, if not only *we* but *you* work in this way—if all your efforts for good otherwise have this to back them up, that you are earnest, devoted, active, self-sacrificing friends of the temperance cause. It is because we have this conviction, that now we urge on you the adoption, the acting out, and the furtherance of our principles, while, with all our heart, we wish you again, and in such a hope, A HAPPY NEW YEAR.—*Bristol Temperance Herald.*

HOMES OF THE LONDON POOR.

We are now at that season of the year when men trim their lamps, poke their fires, prepare their feasts, and gather round them their little ones, their relatives, and their friends, and endeavour to make up for the gloom without by the brilliant crackling of the Christmas log and the still more brightening influences of merry faces and cheerful hearts. Alas for those to whom the season is but a black-letter day, reminding them of what has been! Alas for so many thousands of poor families who can find no compensation in their squalid homes for the absent fervour of the summer sun and the cheap enjoyments of out-door life! We are not, however, about to make any appeal to what is called "charity," but rather to remind our readers that there is yet work to be done, which would be attended with the happiest results to our poorer fellow-countrymen, and would not involve loss to any person who might take it in hand. Let any one of ordinary humanity take a stroll, after the fashion of the Caliph in the Arabian tales, through those districts of London in which misery and squalor are to be found at their highest point of intensity, and then turn to the model lodging-houses, in which so many families who would otherwise be living in the midst of discomfort, disease, and degradation, are actually in the enjoyment of comfortable homes. There is the bane, and there the antidote, there the plague spot, and there the remedy by which it may be blotted out. There is no method by which a philanthropist can hope to alleviate the miseries of the poor so successfully as by fighting the battle of the "decent home." Drunkenness itself—that curse of the English poor—is

rather a consequence of penning human beings up promiscuously in filthy sties than the wretched lodging is the consequence of the fiery drink. We find among the richer classes that even gentlemen, who might take their pastime in the midst of their family circles in Grosvenor or in Belgrave-square, will sometimes slip off to the brightness and gossipry of their clubs; but how if, in place of finding at home a pleasing matron, all velvet and smiles, half-a-dozen little ladies and gentlemen, whose only anxiety is whether Adolphus shall go to Eton "next half," or whether little Cordelia's pony shall be black or gray (the question of the tail being reserved), and three or four powerful retainers in plush, with a large development of calf, who contrive to throw a religious expression into their faces whenever their master requires his hat—how, we say, if in place of all this a man on returning to his home finds a fierce virago ready to take him in hand, two of his children fighting over an empty porter pot, a couple more being already on the list of casualties—how, if his eldest daughter is dying of consumption on a miserable pallet in the corner of that single, stinking, smoky room—if, indeed, she be not out upon the streets doing worse—how, if the heir-apparent has just returned from a dog-fight, swearing, sulky, and contused—how, if lines be drawn across the room, from filthy wall to filthy wall, and upon these lines are extended wet, reeking rags, and, when the head of the family asks for food, none is to be had, or none that a man's stomach would not reject? Is it, we say, very extraordinary that under such circumstances the labouring man should turn out to his club—that is, to the gin palace, with its flaring gas, with its congenial society, with its warmth, with its gin? It may be as well to draw a veil over that temple of domestic bliss, the home of the London Pariah, when he has staggered back at night very drunk, and when father, mother, grown-up sons and daughters, and daughters and sons not grown up, with probably a couple of Irish friends or lodgers, are all littered down promiscuously on the floor of that filthy hole.

Can nothing be done to put to rights that which is so infinitely wrong? Experience seems to answer "Yes!" Unless we have been misinformed in those communications which have been addressed to this Journal upon the subject, investments in model lodging-houses pay a fair rate of interest. The experiment has been tried in more than one place, and in every instance we believe it has succeeded. We are not, however, so enamoured of a single idea that we would not bid most heartily "God speed" to the efforts of all benevolent persons who seek in any way to improve the condition of the dwellings occupied by the very poor.

No later than Saturday we printed a letter from Mr. Thomas Ross upon the subject. This gentleman wished to bring under public notice the proposition recently made for erecting a model lodging-house in Clerkenwell. This proposition has just been rejected by the Common Council, and, Mr. Ross appears to think, with reason. A single lodging-house in this district, he says, would be but a slender alleviation of the misery which unfortunately prevails in it to a most lamentable extent. The Court of Common Council had recently appropriated a sum of £42,000 for the purpose of providing suitable dwellings for the industrious poor. Mr. Ross's opinion is that if some £10,000 or even £5,000 per annum, in addition, be granted, and the aggregate sum be appropriated to the improvement of the tenements actually existing, a greater sum of good will be produced. "There are," he says, "more than 20,000 working people in my ward alone. Many of these poor people are living in houses built back to back, badly constructed, with narrow passages and low staircases, and dark, close, fetid, unhealthy —totally unfit for human habitation. These houses are commonly situated in narrow courts, where the wholesome breezes never enter and the sun never shines. Scrofula, fever, and consumption are consequently habitual visitants." Mr. Ross holds that more advantage would result from operating upon the existing tenements than from the erection of one or more lodging-houses. It is no business of ours to decide amid conflicting opinions upon such a matter, for actual local knowledge is the one indispensable

requisite for such an office. We do, however, most earnestly call the attention of our readers to the subject. Here is a fertile field of action for all persons who are desirous of marking their passage through the world by acts of real humanity and beneficence. Improve the dwellings of the poor as they are; build model lodging-houses; lay down a metropolitan railway to suburban districts; do, in short, what you will, but do something. Philanthropy should own no parties. There are many ways of doing good.—*The Times.*

THE CAUSES OF CRIME.

The able general and the able politician have many things in common. To discover the key of a position after a rapid reconnaissance, and to act upon the discovery with firmness and sagacity, is one of the rarest qualities of a great commander. This is the quality which distinguished Napoleon above most men, and which, although little appreciated by the vulgar crowd, enabled him to achieve his marvellous exploits at the smallest sacrifice of life and labour. This is the faculty which was so lamentably wanting amongst the officers in the late war; the want of which probably occasioned as many losses and disappointments as most of the other causes put together. To seize the point of attack or the point of defence is everything. The young Corsican artillery officer at Toulon and the young Wellesley at Assaye are, splendid illustrations of this axiom. It is the same in politics. Thousands of people can certify that something is wrong. The insecurity of life or of property, and the injury inflicted by bad laws, are proved by the experience of every-day life. Legislation is tested by its fruits. The condition of the governed is the only touchstone which can be applied in order to show whether laws are good or bad. Opinions may differ as to the proper remedy, but the fact of a remedy being needed is ascertained with ease and certainty. Even the populace may to this extent be the judges. Their verdict is conclusive. In this, at least, *Vox populi vox Dei* is an axiom absolutely true. The business of the statesman is to find out the cause of the defects complained of, and to invent and apply the true remedy. Like the general, he must find out the key of the position—like the physician, he must lay his finger on the root of the disease. It is the duty of every government, whether despotic or constitutional, to apply itself vigorously to this task. But most especially is it the duty and the interest of the ministers in a constitutional government, because not only the dangers of neglecting the complaints of the people are more serious to the government itself, but it is our firm conviction, that whenever the people of such a country as England, for instance, have the cause of any evil and its remedy pointed out, they do not long delay assenting to its application. These are, indeed, mere truisms, but the times in which we live do not make it the less necessary to repeat them. At present, the whole country seems paralysed with terror at the thought of our liberated convicts. To judge from some of the public journals, you might suppose that no man ought to walk out after ten o'clock at night without having made his will—and that any bachelor who is permitted the use of a latchkey endangers the safety of the whole household. No remedy is too strong for this supposed social anarchy. Hanging or the guillotine is not out of the question. And the whining sentimentalists, who, but a few years ago, shed tears over the picturesque letter of a famous novelist describing the gallows at Newgate, now gloat with a fierce joy over the confessions of "A London Scoundrel." Such are the extravagancies of popular feeling; but such extravagancies may be turned to good account. Public feeling, it seems, is roused on the subject of our criminals; and that feeling must not be allowed to evaporate, but must be turned into the right channel. Let the government point out with calmness, and by ample, well-digested evidence, the causes of crime. Let them convince the public how crime is generated; let them lay bare the root of the evil, and let them insist upon an efficient remedy.

Undoubtedly one of the chief causes of crime is the neglect of our pauper children, who amount to no fewer than 200,000 human beings. Mr. Gladstone once told the House of Commons that the reading of Blue Books was far less com-

mon than it ought to be. He was right. We do not believe that if any rational man would take the trouble to read the reports of the School-inspectors or the Poor-law Board, he would hesitate for a moment to recognise the condition of our pauper children as one of the chief causes of crime, or to insist upon the necessary remedy being at once applied. It will certainly be one of the chief duties of the person who is to represent the education department in the House of Commons to take up this subject. Both reason and experience concur in the view that nothing can be done towards reforming our pauper children unless they are separated from the adult paupers in the workhouses, and placed in separate establishments. So long as they remain in the workhouses they are contaminated by contact with the vilest moral corruption: when they are separated from the adult paupers they turn out as admirable members of society as any of their fellow creatures in the upper ranks. Some years ago an act of parliament was passed which enabled parishes or unions to combine for the purpose of erecting district schools where the pauper children might be brought up separately; but unhappily this act has remained almost a dead letter, for only six district schools have been erected in consequence. Curiously enough, however, the most of these are within the metropolitan district, and indeed within that same district there are no fewer than sixteen schools—though not technically district schools still of the same nature—where the children are completely separated from the adult paupers, and thus removed from contamination. This metropolitan district, we may observe, includes Middlesex, Surrey, Sussex, Kent, parts of Essex, Hertfordshire, and Buckinghamshire. Now it is certainly a most remarkable fact that the district which has taxed itself for the purpose of erecting these district schools for pauper children is peopled by an enormous mass of poor people, and that the persons who have voted the requisite sums vote on the principle of universal suffrage—for it should be remarked that every one who pays a farthing to the poor rate, even women, is entitled to vote. This fact demonstrates the opinion which the inhabitants of the districts in question—the districts which have erected these schools—entertain as to the necessity of educating the pauper children properly, and the ultimate economy of the plan. Nor is the opinion to be wondered at, if we consider the facts of the case. Let Mr. Tufnell, the Inspector of the Metropolitan District, supply them. Let us take Stepney school. Out of a population of 110,775, there were 450 children at school during the first week of January, 1856. During the five years, 1851 to 1855, there were admitted 669; discharged, 626; sent to sea, 183; sent to service on land, 46. Now of these last two classes, amounting to 229, there were only four returned to the establishment, three were in the adult workhouse, four had died, two had committed crimes and were in a reformatory, and no fewer than *two hundred and sixteen were known to be doing well.* Observe, out of 229 pauper children, no fewer than 216 were known to be doing well. The two who had committed crimes were both the victims of parental influence. Both had been sent to sea, and both were induced to desert their ship by the influence of their mother. Again, it is surely an instructive fact that no *orphan* child sent to the Stepney school has ever been known to misconduct himself. And it is a no less instructive fact, attested by experience, that whilst orphan children turn out the best members of society when properly cared for, they turn out the worst when abandoned to themselves. This is confirmed in a remarkable manner by the circumstance that in the Parkhurst Reformatory 60 per cent. are orphans, and by the Poor-law Returns we find that 60 per cent. are also orphans or deserted. Thus, it appears that almost every one of these orphan and deserted children, who are the most docile, and who, if cared for, turn out the best members of society, being in fact uncared for, find their way by crime into the reformatory schools. The wretched Turks compel their government to hear their complaints by raising incendiary fires through Constantinople; the orphans and deserted children of England claim the attention of their country—the only mother they have—by committing crime and abandoning themselves to vice. This is a state of things which must not be

suffered to continue. Whatever may be done with these wretched victims, whom a false delicacy dooms to the care of parents hopelessly profligate, the State is bound, by every consideration of humanity, to see that the orphan and deserted children obtain that education to which they are so justly entitled. For this end we must have district schools where the poor children may be protected from the contaminations of the workhouse.—*Daily News.*

THE LAST IMAGE ON THE EYE.

The following narration is so deeply interesting that we deem it needless to offer any apology to the readers of the Journal for placing it before them. Our authority is an English provincial newspaper. The writer tell us—"By the microscope, by the electric telegraph, and by other agencies, science has largely tended to promote the cause (all-important to a community) of criminal jurisprudence. We have now to add to her discoveries one of the most remarkable which ever came under our notice. We premise the facts we record are derived from a perfectly reliable source:—'The astonishing and intensely interesting fact was recently announced in the English papers of a discovery that the last image formed on the retina of the eye of a dying person remains impressed upon it, as on a daguerrean plate. Thus it was alleged, that if the last object seen by a murdered person was his murderer, the portrait drawn upon the eye would remain a fearful witness in death to detect the guilty and lead to his conviction. A series of experiments has recently been made by Dr. Pollok, of Chicago, to test the correctness of this statement. In each experiment that Dr. P. has made, he has found that an examination of the retina of an eye with a microscope reveals a wonderful as well as a beautiful sight, and that in almost every instance there was a clear, distinct, and marked impression. We put these facts upon record, in the hope of awakening an interest in the subject, that others may be induced to enter upon these interesting experiments, and the cause of science advanced. The recent examination of the eye of J. H. Beardsley, who was murdered in Auburn, conducted by Dr. Sandford, corresponds with those made elsewhere. The following is the published account of the examination: At first we suggested the saturation of the eye in a weak solution of atrophine, which evidently produced an enlarged state of the pupil. On observing this, we touched the end of the optic nerve with the extract, when the eye instantly became protuberant. We now applied a powerful lens, and discovered in the pupil the rude, worn-away figure of a man, with a light coat, beside whom was a round stone, standing or suspended in the air, with a small handle stuck as it were in the earth. The remainder was debris, evidently lost from the destruction of the optic nerve, and its separation from the mother brain. Had we performed this operation when the eye was entire in the socket, with all its powerful connection with the brain, there is not the least doubt that we should have detected the last idea and impression made on the mind and eye of the unfortunate man. The thing would evidently be entire; and perhaps we should have had the contour, or better still, the exact figure of the murderer. The last impression before death is always more terrible on the brain from fear than any other cause; and figures impressed on the pupil more distinct, which we attribute to the largeness of the optic nerve and its free communication with the brain.'"

HEALTH AND DISEASE.

Health is an empire which must co-extend
With sunny life, and on its rays depend;
And when, forlorn, we witness them retire,
'Tis Death's cold hand extinguishes the fire.
What mighty deeds this renegade performs!
Besieges life and its defences storms;
Attacks the provinces, and, in his rage,
Bids his colleagues, the sentinels, engage.
Believe not, guards, he is invincible,
Since great achievements spring from human skill.
Sometimes, with him, in deep decline, or age,
'Twere indiscreet a hopeless war to wage.
But be prepared, and with your force repel
The enemy advancing to rebel
Against imperial power, and change the laws
Which militate against the offending cause.
'Tis heat removes impediments, and frees
The system from its enemy—Disease.

JOHN EVANS.

Bradford November 10th, 1856.

HEALTH OF LONDON DURING THE WEEK.

After a sudden increase of mortality, the weekly returns again exhibit results of a very favourable character. In the week that ended on Saturday, the deaths registered in London decreased to 1,060. In the ten corresponding weeks of the years 1846-55, the average number of deaths was 1,269; but if the excess of deaths in the fifty-first week of 1847, when influenza nearly doubled the mortality, be excluded from the calculation, and the average, thus reduced, be corrected for the increased population of the present time, it will be found that the ordinary rate of mortality at this season would have produced 1,300 deaths last week, and therefore more by 240 than the number actually returned.

The number of deaths referred to the zymotic class of diseases is 187, whilst the corrected average of corresponding weeks is 317. It may be remarked that none of the diseases of this description show a tendency to prevail to an excessive degree; the mortality from smallpox, which numbered 6 deaths last week (all, except one, in the Smallpox Hospital), is low; and the greatest number of deaths in the zymotic class is referred to scarlatina, which was fatal in 42 cases, the corrected average being 53. Forty children died from hooping-cough, and 23 from measles. The deaths from typhus or common fever were 37, exhibiting a decrease on previous weeks. On reference to the table which exhibits the topographical distribution of six principal epidemics, it will be seen that the eastern division of the metropolis contributes more than its just contingent to the total mortality from scarlatina and typhus; and to whatever cause it is to be attributed, the same fact has been frequently observed in the current year. Diseases of the organs of respiration were fatal last week in 230 cases, showing a considerable decrease on the numbers in two preceding weeks, which were successively 368 and 287. Bronchitis was the fatal disease in 110, or nearly half of the whole number; whilst pneumonia carried off 93 persons, of whom 71 were children. In the last three weeks phthisis or consumption, which stands in the tubercular class, caused 164, 130, and 119 deaths. The deaths of 3 persons are returned as caused by intemperance. The births of 868 boys and 823 girls, in all 1,691 children, were registered in London last week. In the ten corresponding weeks of the years 1846-55, the average number was 1,465.

Old English Manners and Customs.—The records of the Percy family, in the time of Henry VII, show the extreme coarseness of the mode of living; and an extract or two from the household book of that famous family will give a better idea of the manner in which the most famous noble of the time lived than anything else I know of. The permanent household numbered 166 persons, and the average of guests was fifty; and the whole of the washing for these 216 persons was for one year 40s.—a sum probably equal to £40 in the present day—most of which was for the chapel linen. From Midsummer to Michaelmas was the only time they indulged in fresh meat, and the instructions say, "My lord has on table for breakfast, at seven in the morning, a quart of beer and wine, two pieces of salt fish, six red herrings, four white ones; and on flesh days, half a chine of beef or mutton boiled." At dinner, men ranking as knights had a table-cloth which was washed once a month; and as they had no napkins, and the fingers were extensively used in feeding, this portion at least of their linen must have been in a delightful condition. Until the thirteenth century, straw was the bed of kings, and before that date the king and his family slept in the same chamber. The first change was to throw a coverlid over the sleeper, then another was used and the person was undressed, their linen being substituted for blankets. Beatrice says she would "as lief sleep in the woollen," which shows, I think, that such a thing was done even in Shakspere's time.—*Lecture by W. Tite, Esq., M.P.*

A Doctor's Dodge.—A deceased surgeon adopted an ingenious plan for collecting his fees; he had two bells, when he rang one the servant knew the fee was paid, and bowed the visitor out; when he rang the other, the servant said, "I think, sir, you have forgotten to give Mr. Lock his fee," and he did not open the door until the fee was paid.

NOTICES.

Dr. Coffin will commence a course of Twelve Lectures on Medical Botany, at Sussex Hall, Leadenhall-street, on Monday, January 12, 1857, at eight o'clock; and will continue them on each succeeding Monday, till the end of the course.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury Branch.

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COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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MEDICAL REFORM.

We learn from credible authority, that, notwithstanding the repeated defeats of the allopaths to gain an entire monopoly of the right to administer medicine, another scheme is being concocted, and another organisation is in process of formation, to put down hydropathy, homœopathy, Medical Botany, and every other system which may be antagonistic to the medical faculty as recognised by law. The indubitable M.D. and M.P. for Leitrim is set on reform. We are second to no journalists in our conviction of the necessity of a radical reform in medicinal practice; but we are far from thinking that any or every change is to be viewed as an improvement. The present character of medical practice, fenced about as it is by legal enactments, is far from being in a healthy state, and falls infinitely short of the requirements of the nation. The last quarterly report of the Registrar-General is anything but flattering to a profession which arrogates to itself the right and power of curing the diseases of the people. It would be a great improvement in making up these reports if, henceforth, it shall be required that, in addition to classifying the diseases under which patients died, there should also be a classification of the treatment they received. A tabular view of the number dying under the several systems now extant might assist the public to judge of the comparative merits of each system, and prepare the Parliament to legislate on the subject; and if this style of the statistics of mortality be adopted, we have no fear for the issue in reference to Medical Botany, since we are fully assured, that out of the thousands who have died it will be evident that somewhere about 95 per cent. will be classed among those who have died under the treatment of allopaths, leaving less than five per cent. to be classed among those who have died under the botanic treatment. Once more we express our regret that our readers, and others who practise the Botanic System, have not adopted our suggestion, often repeated, that a register should be kept which would show the particulars of all patients subjected to this treatment, so that, whether they recovered or died, it might be seen what are the results of Botanic Medicine among the people at large. With the returns from all parts of the country before them, it would be impossible that the members of the House of Commons could be misled by Dr. Brady, of Leitrim, or any of his co-adjutors, by the sophistry which they employ to obtain enactments to put down a system which is conferring its benefits on tens of thousands.

The reform contemplated not only designs to suppress the practice of any and all other systems, except that which is patented by Apothecaries' Hall and the College of Physicians, and protected and petted by the Government, but it contemplates the abolition of what is technically called "counter practice." None can be more anxious for the removal of this latter custom than we are. It is one that is fraught with innumerable evils. At present, the miseries arising from the dispensing of drugs, even when they are

supposed to be according to the prescription of an *orthodox* physician, are very great. Sometimes the druggist's assistant is incompetent correctly to read the prescriptions; at other times it is accurately read, but he makes a blunder and takes down the wrong bottle, and mixes some deadly ingredient in the draught or the pills, and the mistake is not discovered in some cases until the patient dies, and in many other cases it passes altogether undetected. Prescriptions are frequently written as if they were never intended to be understood, and the apothecary or druggist is left to guess at both the material and quantity ordered by the very learned doctor of medicine, whose diploma seems to be of little use but to license him to write to puzzle the man of pestle and mortar. We have before us about thirty prescriptions, which would give no small trouble to a good classical scholar to translate correctly; but it is a well known fact, that many of those to whom the making up of medicines is ordinarily entrusted, are youths raw from some school, where, perhaps, the teachers had never heard of Celsus, Gregory, or any other Latin writer upon medical subjects. Nor are these, bad as they are, the worst parts of "counter practice." In the shops where poisons are as available as grains of corn in Mark-lane, the minds of youths are often polluted by ignorant and unchaste women, who resort to druggists to obtain certain medicines, which may either excite their passions or procure abortion. We have reason to fear that this class of women is more numerous than is generally supposed. The influence which this intercourse produces on young minds is damaging, corrupting in the extreme. We could specify cases of this class, if delicacy did not forbid. Suffice it to say, that some young men, disgusted with the filthy revelations of "counter practice," have had the moral courage to leave the retail drug business for the wholesale, that they might escape the contamination to which they were exposed; while others have fallen victims to vice, being allured to the dens of these harpies under the pretence of seeking advice. Independently of this evil, there is another which must not pass unnoticed: we refer to the facility which is thus afforded for getting possession of poisons to destroy the lives of others. We may be wrong, but we have many reasons for thinking that we are right, when we give our opinion, that mothers have been assisted to destroy their children, wives their husbands, by the gossiping in the druggist's shop, under the pretext of asking advice. Upon these grounds, and others which we would state did our space allow, we heartily desire a reform which would abolish "counter practice." Were this to be done away, it would be a great stride in the right direction, and would hasten on the time when all deadly poisons should be entirely excluded from the nation's *materia medica*, and when men should be induced to use the herbs which God has given for the healing of the people.

DRAINAGE PLAN FOR THE METROPOLIS.

By Mr. William Footman.

The proposed plan is wrong in Principle, and will not effect Sanitary Improvement.

1. The object of the plan is merely the removal of what is a nuisance, not its annihilation, or even reduction. If that plan could be carried out, it would, in fact, merely remove the sewer outlet or point of pollution a few miles further down the river, and in doing so, would prolong, increase, and extend the present sewerage system, place the sewage under worse conditions than now exist, and greatly aggravate the evils arising from the present defective arrangements.

2. Now though the flow of sewage into the river is stopped during 4 hours of high water, it passes into the river at many points during $8\frac{1}{2}$ hours out of $12\frac{1}{2}$, becomes at once highly diluted, and the entire sewage, mud and all, is swept away by the current; for though mud-banks exist, there is no evidence of any accumulation of subsiding matter. The proposed plan, if carried out, would store and expose the sewage for an additional period of time of 20 hours (10 in flow and 10 in reservoirs), create an additional surface exposure of many acres (in channels and reservoirs), and then cast it into the river at one concentrated point, where, from the expanse of water, the current might not exert a sufficient influence.

That thus merely removing the point of pollution in the manner proposed will produce greater sanitary evils, hardly admits of doubt, particularly if that great extension and exposure of sewage be considered in connection with the proposition to bring the sewage of Brentford, Richmond, and the whole of the western suburbs, in its undiluted state, through the heart of the metropolis.

3. The immense amount of sewage deposit may be correctly estimated. If sewage is stored in reservoirs, that deposit averaging in the present state of sewage 1-50th of sewage, will half fill and thus choke up the reservoir in 25 days; increased dilution will necessitate an increase of reservoir capacity, without materially affecting sewage deposit. To barge away that sewage deposit would be too intolerable a nuisance; and it could only be sluiced into the river from the proposed reservoirs at or near low water, when the returning tide would not only bring it back again into the metropolis, but deposit it at high water over the widest possible area.

4. The alternative of constant discharge at Sea Reach, besides its enormous cost, is also highly objectionable in a sanitary point of view. The state of the river at the present sewer outlets, where the current prevents any accumulation of deposit, is intolerable enough; but what would be the effect were the whole of that subsiding matter discharged in Sea Reach, and deposited on the vast expanse of flats and sands at the mouth of the Thames? The very existence of those flats and sands demonstrates the fact and extent of subsidence there. When those vast sands are covered with the putrefying mud of sewage, which each succeeding tide would deposit and leave exposed, what will be the effect of summer suns in generating malaria? and how feeble must be the efforts of science in even modifying the baneful effects of so extensive and powerful a source of pestilence!

The present plan of the Metropolitan Board is one, therefore, from which no sanitary improvement can reasonably be expected; and though the letter of the Act of Parliament respecting the outlet of sewage into the Thames might be complied with, yet the outlet on such a plan, by increasing sanitary evils, would be "an expenditure worse than waste."

The substitute for such a practice, although in a somewhat crude manner, is satisfactorily in operation in several parts of the country, and is not only capable of general adoption, but is particularly available for the metropolis. It may be concisely stated as a system of rapid filtration or mechanical separation of the subsiding matter and fluid of sewage. The works for this purpose might be constructed in convenient parts of the suburbs, would require to be but of one-tenth of the extent of the reservoirs requisite in Plan B, and would not create any nuisance. Under this system the water of sewage, clear and inodorous, might be still further utilised, or at once pass off by the nearest point of outfall; the disengaged subsiding matter, being about 1-50th of sewage, would then in an effectual manner be reduced to one-eighth of dry residuum, and in that state be conveniently restored to the soil. And it must be evident that the practical and economical separation of the 400th part, allowing 399 parts to flow away by gravitation, would be more economical and satisfactory process than to construct extensive works and resevoirs to convey the whole to a distance. In such a plan the treatment of the sewage of the western districts on each side of the river may be effected in those suburbs, instead of the monstrous proposition to convey it through the heart of the metropolis, and having afterwards to pump it up. By such a plan a very large portion of the present proposed outlay may be saved, the intercepting sewage be more practically carried out, and a great sanitary improvement be effected. —*The Metropolitan.*

THE UNMEANT REBUKE.

Charles Nelson had reached his thirty-fifth year, and at that age felt himself going down hill. He had once been one of the happiest of mortals, and no blessing was wanting to complete the sum of his happiness. He had one of the best of wives, and his children were intelligent and comely. He was a carpenter by trade, and no man could command better wages or be more sure of work. But a

change had come over his life. A demon had met him on his way, and he turned back with the evil spirit.

In a back street stood a small cottage, which had once been the pride of its inmates. In front of it stretched a garden; but tall, rank grass grew up among the choking flowers, and the paling which fenced it was broken in many places. The house itself had once been white, but it was now dingy and dark. Bright green blinds had once adorned the windows, but now they had been taken off and sold. And the windows themselves bespoke poverty and neglect; for in many places the glass was broken, and shingles, rags, and old hats had taken its place. It was the drunkard's home.

Within sat a woman yet in early years of life; though she was still handsome to look upon, the bloom was gone from her cheek, and the brightness had faded from her eyes. Poor Mary Nelson! Once she had been the happiest among the happy, but now none could be more miserable! Near her sat two children, both girls, and both beautiful in form and feature; but their garbs were all patched and worn, and their feet were shoeless. The eldest was thirteen years of age, and the youngest two years younger.

For more than two years Mary Nelson had earned all the money that had been earned in the house. People had hired her to wash, iron, and sew for them, and besides the money paid, they gave her many articles of food and clothing. So she lived on, and the only joys that dwelt with her now were teaching her children and praying to God.

Supper time came, and Charles Nelson came reeling home. He had worked the day before at helping to move a building, and thus had earned money enough to find himself in rum for several days. As he stumbled into the house, the children crouched close to the mother, and even she shrank away, for sometimes her husband was dangerous when thus intoxicated.

Oh! how that man had changed within two years! Once there was not a finer-looking man in the town. In frame he had been tall, stout, compact, and perfectly formed, while his face bore the very *beau ideal* of manly beauty. But all was changed now. His noble form was bent, his limbs shrunken and tremulous, his face all bloated and disfigured.

That evening Mary Nelson ate no supper, for all the food she had in the house was not enough for her husband and children; but when her husband had gone, she went out and picked a few berries, and thus kept her vital energy alive. That night the poor woman prayed long and earnestly, and her little ones prayed with her.

On the following morning Charles Nelson sought the bar-room as soon as he arose, but he was sick and faint, and liquor would not revive him, for it would not remain on his stomach. He had drunk very deeply the night before, and he felt miserable. At length, however, he managed to keep down a few glasses of hot sling, but the close atmosphere of the bar-room seemed to stifle him, and he went out.

The poor man had sense enough to know that if he could sleep, he would feel better, and had just feeling enough to wish to keep away from home; so he wandered off towards a wood not far from the village, and sank down by the side of the stone wall, and was soon buried in a profound slumber. When he awoke, the sun was shining down hot upon him, and, raising himself to a sitting posture, he gazed about him. He looked through a chink in the wall, and just upon the other side he saw his two children picking berries, while further off were two more girls, the children of the carpenter who had lately moved to the village.

"Come, Katy," said one of these latter girls to her companion, "let's go away from here, because if anybody should see us with these girls, they'd think we played with 'em. Come."

"But berries are thick here," remonstrated the other.

"Never mind; we'll come some other time, when these little ragged drunkard's girls aren't here."

So the two favoured ones went away hand in hand, and Nelly and Nancy sat down upon the grass and cried.

"Don't cry, Nancy," said the elder, throwing her arms around her sister's neck.

"But you are crying, Nelly."

"Oh, I can't help it," sobbed the stricken one.

"Why do they blame us?" murmured Nancy, gazing up in her sister's face. "Oh, we are not to blame. We are good, and kind, and loving, and we never hurt anybody. Oh, how I wish somebody would love us! I should be so happy."

"But we are loved, Nancy. Only think of our mother. Who could love us as she does?"

"I know—I know, Nelly; but that isn't all. Why don't papa love us as he used to do? Don't you remember when he used to kiss us and make us happy? Oh, how I wish he could be so good to us once more! He is not——"

"Oh, sissy! don't say anything more. He may be good to us again; if he knew how we loved him, I know he would. And then I believe God is good, and surely he will help us sometime."

"Yes," answered Nancy, "I know he does; and God must be our father sometime."

"He is our father now, sissy."

"I know it; but he must be all we shall have by-and-by; for don't you remember mother told us that she must leave us one of these days? She said a cold finger was upon her heart, and—and—"

"Hush, sissy! Don't, don't, Nancy! you'll—"

The words were choked with sobs and tears, and the sisters wept long together. At length they arose and went away.

As soon as the little ones were out of sight, Charles Nelson started to his feet. His hands were clenched, and his eyes were fixed on a vacant point with an eager gaze.

"My God!" he gasped, "what a villain I am! Look at me now! What a state I am in, and what I have sacrificed to bring myself to it! And they love me yet, and pray for me."

He said no more, but started homeward. When he reached his home, he found his wife and children in tears, but he affected to notice it not. He drew a shilling from his pocket—it was his last—and handing it to his wife, he asked her if she could send and get some milk and flour, and make him some porridge. The wife was startled by the strange tone in which this was spoken, for it sounded just as that voice had sounded in days gone by.

The porridge was made nice and nourishing, and Charles ate it all. He went to bed early, and early on the following morning he was up. He asked if she had milk and flour enough to make him another bowl of porridge.

"Yes, Charles," she said, "we have not touched it."

"Then, if you are willing, I should like some more."

The wife moved quickly about the work, and ere long the food was prepared; the husband ate it, and he felt better. He washed and dressed, and could have shaved had his hand been steady enough. He left his home and went at once to a man who had just commenced a frame-house.

"Mr. Manley," he said, addressing the gentleman alluded to, "I have drunk the last drop of alcoholic beverage that ever passes my lips. Ask me no more questions, but believe me now while you see me true. Will you give me work?"

"Charles Nelson, are you in earnest," asked Manley in surprise.

"So much so, sir, that were death to stand upon my right hand, and yonder bar-room upon my left, I would go with the grim messenger first."

"Then here is my house lying about us in rough timber and boards. I place it all in your hands, and shall look to you to finish it. While I can trust you, you can trust me. Come into my office, and you shall have the plan I have drawn.'

I will not tell you how that stout man wept, and how his noble friend shed tears to see him thus; but Charles Nelson took the plan. That day he worked but little, but he arranged the timber, and gave directions for framing. At night he asked his employer if he dared to trust him with a dollar.

"Why, you have earned three," returned Manley.

"And will you pay me three dollars a day?"

"If you are as faithful as you have been to-day, for you will save me money at that."

He received his three dollars, and on his way home he stopped and bought first

a basket, then three loaves of bread, a pound of butter, some tea, sugar, and a piece of beefsteak; he had just one dollar and seventy-five cents left. With this load he went home.

"Come, Mary," he said, "I have brought something home for supper. Here, Nelly, you take the pail and run over to Mr. Brown's and get a couple of quarts of milk."

He handed her a shilling as he spoke, and in a half-bewildered state she took the money and hurried away.

The wife started when she raised the cover of the basket, but she dared not speak. She moved about like one in a dream, and ever and anon she would cast a furtive glance at her husband. He had not been drinking—she knew it—and yet he had money to buy rum with if he wanted it—What could it mean? Oh, how fervently did she pray then!

Soon Nelly returned with the milk, and Mrs. Nelson set the table out. After supper, Charles arose, and said to his wife:—

"I must go up to Mr. Manley's office to help him to arrange some plans for his new house, but I will be at home early.

Just as the clock struck nine, the well-known foot-fall was heard. The door opened and Charles entered. He had been to the barber's and to the hatter's. Charles wished to retire early, and his wife went with him. In the morning the husband arose and built the fire.

After the meal was eaten, Charles arose and put on his hat, and then turned to his wife and asked:—

"What do you do to-day?"

"I must wash for Mrs. Bixby."

"Are you willing to obey me once more?"

"O—yes!"

"Then work for me to-day. Send Nelly over to tell Mrs. Bixby that you are not well enough to wash, for you are not. Here is a dollar, and you must do with it what you please. Buy something that will keep you busy for yourself and children."

Mr. Nelson turned towards the door, and his hand was upon the latch. He did not speak, but he opened his arms, and his wife sank upon his bosom. He kissed her, and then having gently placed her in a seat, he left the house. When he went to his work that morning he felt well and happy.

It was Saturday evening, and Nelson had been a week without rum. He had earned fifteen dollars, ten of which he had now in his pocket.

"Mary," he said, after the supper-table had been cleared away, "here are ten dollars for you, and I want you to expend it in clothing for yourself and children. I have earned fifteen dollars during the last five days.

"Mary," he whispered, while the tears ran down his own cheeks, "you are not deceived. I am Charles Nelson once more, and will be while I live. Not by any act of mine shall another cloud cross your brow." And then he told her of the words he had heard on the previous Monday, while he lay behind the wall.

"Never before," he said, "did I fully realise how low I had fallen, but the scales dropped from my eyes then as though some one had struck them off with a sledge. My soul started up to a stand-point from which all the tempters of earth cannot move it. Your prayers are answered, my wife."

Time passed on, and the cottage once more assumed its garb of pure white, and its whole windows and green blinds. The roses in the garden smiled, and in every way did the improvement work. Once again was Mary Nelson among the happiest of the happy, and their children choose their own associates now.

THE FAIR SEX AND THEIR DIET.

We are a dining nation; and, at dinner, the finest qualities of the heart and intellect are instinctively exhibited. We do not like to see a young lady ignore our food, or turn from the proffered wing of chicken, albeit with an air of the prettiest disgust. That always, to us at least, engenders suspicion of previous banquets, of surreptitious luncheons, of forenoon indulgences in cakes and hot jelly, it may be with a flavour of maraschino. We see at once that there is a falsity in our sweet neighbour's performances, that she is acting a part deliberately studied and conned, and we remember, with a shudder, the story, in the "Arabian

Nights," of the lady who restricted herself to a few grains of rice, at regulated mealtimes, in order that she might be properly appetised for her hideous supper with the Ghouls. This is bad enough, but what shall we say of an undisguised voracious woman? It is frightful that such a thing should be; yet, nevertheless, we lie not when we assert its existence. Gluttony is not altogether a male sin; it can be found in the female. How often have we beheld it in the Park carriages rolling by, containing enormous women, bursting with plethora, in whose rubicund countenances the awful signs of habitual hot luncheons appeared! Are they to be pitied? Yes; but their husbands are more pitiable still. For we cannot conceive anything more wretched and deplorable than the case of a man who, after his day's work in the City or at Chambers, returns home with a freshened appetite, and seats himself at table with a few friends whom he proposes hospitably to entertain—when, opposite him, the partner of his couch, the once slim and elegant Laura Matilda, sits in mute obesity, her perceptions dulled by satiety, and a sullen scorn upon her heavy lip—when Brown, and Jones, and Smith, the dearest friends of his soul, vainly assail her with Threadneedle jokes, and the last pungencies of the Exchange—when even Bosh, the wit of the club, who has been known to extort a grin from a redtapist, attempts his fascination in vain. —*Blackwood's Magazine.*

INFLUENCE OF INTOXICATING AGENTS ON THE MIND.

Inordinate excitement is the result of inordinate arterial action of the brain, and, of course, if once established, it is apt to go on as a chronic disease, subject to alternations of activity and exhaustion, with consequent changes in mental manifestation. A certain order, as regards time, in the action of the nervous system, is essential to its orderly employment by the mind; for thoughts and ideas are but as the shifting of the scenes in the dramas of the soul. Disease of the brain, and every disorder in the functions of its several parts, whether produced by the state of the blood, or the state of the morals, equally interferes with orderly nerve-action, and therefore so far disturbs memory and imagination: hence, in the hurry of excitement, comparison is impaired in proportion to the degree of that excitement. It may amount only to what we call nervousness, or it may proceed to the extent of actual madness. Reason may be startled by the rush of ideas, confounded by a crowd of sensations, or altogether lost in the whirl of thoughts suggested to the soul by the workings of the brain. The effects of impure blood on the mental state illustrate the subject; and these are, probably, best exhibited by the phenomena of intoxication, which will, therefore, be especially worthy our attention. Whatever either excites or depresses the nerve-power, appears, in a proportionate degree, to disturb the equilibrium in which the mind and body best maintain their due influence on each other. Every deviation from this equipoise, whether commencing in the corporeal or mental state, is so far a departure from perfect health. If, however, the animal preponderates over the rational, as when the body is stimulated beyond the proper management of reason, then, of course, the rate and character of enjoyment must be degraded and depraved, and the man thus disordered must for the time become insane. The very individual who, under other circumstances, would delight in the beautiful realities of order and truth, in the right use of his senses, now feels some undefined pleasure in the rude fancies that mingle in confusion before his mental vision. The drunken man is, in short, quite a madman. The gradual development of this insanity is curious and instructive. The demon to whom he has voluntarily resigned his faculties, slowly, craftily, witchingly stirs his blood, and then takes full possession of his heart, that he may qualify the man for Bedlam and for hell. See the sot with his strong drink before him. He has taken his seat with a determination to be oblivious of his responsibility as a social being and as an agent of the Almighty, and, instead of setting his attention upon subjects which would raise his soul above his sorrows, he empties his glass until sensations excited by the stimulus disorder his nervous system, and break his thoughts and ideas into fragments, like

the light of heaven upon an agitated sea. At first he is gratified by the splendid confusion—

"He swims in mirth and fancies he has wings,
Wherewith to scorn the earth."

But soon a heavy darkness steals over him, and having forgotten his home and his relationship, and with not a distinct idea left, he looks like a beast that has just satisfied his stomach and has lain down to chew his cud. His eyes stare vacantly into the air, while his features and limbs all lazily partake of that brutal quiet so stupidly expressive of the absence of all possibility of intellectual content; but ere long the stimulus, working mischief within, stirs his brain and blood in a new manner, and he seems to wake up to new perceptions. Objects about him become veiled in a haze, and obscure bubbling, whispering sounds, as from the boiling of the witches' caldron of infernal abominations, fall on his ear, not to disturb, but to enchant his soul with a horrible spell. The mistiness fuming out from that caldron, grows higher and wider, and the serpent sounds thicken and grow louder, until all at once he seems surrounded by a living cloud, full of strange forms and faces; at first pleasing as the fancies of a child, and then suddenly twisting into obscene contortions and hideous grimaces, while words of blasphemy and filthy merriment mingle their babble so closely on his ear, that they seem to issue out of his own heart, and yet he is not afraid. Imagination is doing its worst work; the deluding devil has him at his mercy now, and according to his temperament, he will yield to any temptation that may assail him. He now betrays the secret habits of his mind, and endows his imaginary companions with qualities in keeping with his own fancies. He has voluntarily lost his reason, and therefore both moral and intellectual perceptions are equally obscured, and he no more distinguishes vice from virtue than truth from falsehood. Thus selfish indulgence invariably terminates in complete stolidity and desolation. Though for a time sentimental, witty, or ingenious, as the natural character may determine, having no more control over his desires than he has over his dreams, the thoughts and language of the drunkard mix the sublime and ridiculous in chaotic confusion; and having just power enough left in his reckless hand to pour another glass, his mad inspiration is at once turned into a mumbling idiocy, and then his brain becoming thoroughly palsied, he falls under the table in a disgusting apopletic stupor. The habitual drunkard is disguised, not only by the haggard dinginess and lividity of his features, but also by the perpetual obscurity of his mind. Ask him any question beyond the range of his daily drudgery, and he will fumble aloud in vain endeavours to control his brains, and set them in the order necessary to think and recollect. His ideas are all awry, and his associations all in confusion, for the habit of drunkenness renders the brain always unsteady and unmanageable, ready at the slightest mental effort to fill the man with the most miserable sensations, and to haunt him either with direct terrors or with ludicrous images, mocking him into torment: hence his nerves govern him, and his human powers succumb so completely to the temptations of the pot-house that he can rarely be cured without total abstinence, or by being shut up like a dangerous lunatic. That this term is not too strong we shall see, by observing the nature of that horrible malady which so often torments the habitual drunkard — delirium tremens. The following is a real case, and by no means of the worst character:—A working jeweller was the subject. He resided in London, and, of course, his business required sedentary and intense attention. He found but little opportunity, and, in consequence of habitual fatigue, he felt but slight inclination to take exercise in the air. If on the Sabbath he followed the stream along the dusty road, that after a long journey brings one in sight of green fields, his heart failed him at some public-house within two miles of his home, and, in spite of his wife's entreaties, he would walk in for a rest, and with three or four of his little ones around them, there terminate the holy day amidst debaucheries of the abandoned. Instead of refreshing his soul and body with rest becoming the Sabbath, the poor man hurried into drunkenness, and staggered home conscious of his voluntary degradation. The next day would find him less

fit for his work, yet he would fix himself manfully to it; but by-and-by he feels so disordered that he resolves to break away, and not to return to the shop for a few days. But instead of going at once into the country, where he might sooth his soul with verdure and peace, he seeks the excitement of companionship, and, as he saunters from street to street with a sottish comrade, takes a pint here and a dram there. Thus he proceeds for two or three days, not quite intoxicated, but just in that state in which the animal and the sentimental mutually waver in the balance. At length, however, his nervous system suddenly fails; the stages of intoxication rapidly hurry on, and he is taken to his bed *dead drunk*. After some hours of almost fatal stupor, he wakes up with a fever, burning hands, dull eyes, sallow cheeks, parched lips and tongue, confused mind, trembling limbs, aching loins, and tormenting heartburn that nothing will relieve; but the most overpowering of his sensations is a crushing weight of pain on his brain, with an indescribable sense of dizziness. as if about to fall from a vast height, This headache is so intense, that light is intolerable, and every sound hateful. His temper becomes so irritable, that his wife, who fondly watches him with the hope that he who once loved her will yet come to himself, and repent his unmanliness towards her, dare not remain near him any longer, for the sight of her now maddens him. Thus he passes his day of horrors, to which a night of restlessness succeeds. Towards the next morning, he begins to rave in perfect delirium. Every muscle of his frame shakes violently; his mind is in mad confusion, yet he cunningly attempts to destroy his own life, and when baffled in his rage against himself, he turns it upon those who would hinder him, and the strait-waistcoat alone prevents his committing murder. With careful medical management he recovers, but only for a short time, since some evil power holds possession of him, and compels him to return to the same condition on the first opportunity. In such delirium thousands die; how necessary then to meet the evil in its beginning, which can only be done by habitually abstaining from fermented liquors, as being perfectly unnecessary, and, indeed, essentially injurious to the functions of the body, unless under peculiar circumstances!

(To be continued.)

ALCOHOL NOT FOOD BUT A POISON.

Whenever alcohol is in the system, it crowds immediately to be burned, and all other dead matter must wait for it. Of course also the larger the amount of alcohol, the greater the amount of oxygen which it takes away from this process of burning dead matter. It is not needed to produce heat; for in the healthy body the dead matter is by the wise arrangement of the Maker sufficient, by its combustion, to maintain a proper temperature. What then does alcohol do, but use up the oxygen which is *needed;* produce heat in *excess;* and thus also leave in the body the dead matter whose quota of oxygen it has surreptitiously appropriated?

This dead matter is of course injurious to the body, so that by causing its retention, and by producing an undue degree of heat, alcohol, as the author of double mischief, is true to its usual evil character. We may conveniently illustrate the way in which these dead matters are deprived of their proper outlet, by the interference of alcohol in the following manner:—Here is a large hall, with a main entrance, and two side ones. It is filled with people who desire to escape by the main entrance; but a rude crowd is continually rushing in at the side doors, and out at the main one. It is plain that the body of the people must remain, or seek other modes of egress. Similar is the operation of alcohol. It crowds the main outlet of this waste matter, and thus forces it to remain, or to seek escape by the kidneys, liver, and skin. These are overburdened by their increased work, and enfeebled by other effects of alcohol, and hence tend to a diseased state.

The waste matter may still seek other outlets; and as our supposed congregation may jump out of the windows, so may it break out in sores and eruptions, or, remaining in the system, may add to the bulk, while it detracts from the

vitality of the body. In such persons the smallest wound may prove dangerous, and any serious damage, like the fracture of a limb, for instance, may prove wholly unmanageable, and produce death. This extreme result is, to be sure, but the summing up of a long series; but it is a well known fact, and the very circumstance that it is the summing up of a long series, shows that alcohol is a *cumulative poison*, or in other words, is a poison in small doses as well as in large; for the smallest dose in the healthy system must produce, to a corresponding extent, the injurious substitution which we have pointed out.—*By Rev. Eben. Fisher.*

GLANDS AND THEIR USES.

The word "secretion" is one of frequent use, not only in the writings of medical authors, but in the ordinary and every-day discourse of non-medical individuals. The true import of the term is not, however, at all times conveyed by writers or speakers; and as it is not unimportant that the term should be understood, we will endeavour to make it more clear by a short *exposé* of what it represents. For this purpose the following account of the glandular system will be found useful. The mercurial and antimonial poisons, which are mentioned as producing certain effects, should have found no place in the columns of our Journal, did they not serve by the very words and proofs of the writer, to convince us how dangerous is their use; while Medical Botany, on the other hand, as is proved by thousands of cases of successful treatment, has resources which may be employed without the possibility of fatal consequences from "extreme doses." Our author says:—

1. Secretion is the abstraction of some of the components of the blood, during its passage through the capillaries, and its conversion into new substances. Under this term, however, two distinct transformative processes are carried on; one nutritive, the other excretive. With the former, the class of medicines termed "vital agents" is not immediately connected; although, through their influence upon the latter, they aid it; and restore its salutary action when that is morbidly deranged: the latter is directly modified by their influence upon either the organs themselves, or their excreting pores or ducts. As the excretive secretions differ greatly from one another in the simplicity or complexity of their preparation, the organs must necessarily differ also; but, in whatever manner they are produced, the capillaries are the intermediate organs between the arteries and the veins, from the blood of which, with the exception of the bile, all the excretive secretions are formed. The most simple secreting organs are vital pores; the next are follicles and cryptæ; the most complicated are glands. Little is known respecting either the vital pores, or their mode of performing their functions; the follicles or cryptæ are better known; but it is difficult to fix the precise line of demarcation between them and glands; it is only known that some are simple and solitary, others are grouped or agglomerated; whilst some again are compounded.

The simplest follicles present, in their interior, cellular dilatations, or their sides are formed of cœcal tubes, lying perpendicular to their surface. Many follicles are aggregated, as exemplified in the Meibomian glands; and often those clustered follicles open by a single orifice. Some follicles, again, consist of a convolution of simple canals, that display, nearly throughout, an equal diameter.

Glands or follicles are, therefore, irregularly constructed bodies, and present many varieties. But the most simple gland, a mere recess on a surface of a membrane, as well as the most complex gland, with its ducts, canals, or tubuli, may be regarded as extended organised surface, on which the change of the blood takes place. It has been supposed that the glandular capillaries are furnished with invisible exhalant pores, which permit the escape of the secretion in one direction only, namely, into the cavity of the glandular canals. But surely we cannot regard secretion as a simple exudation. However it may be performed, it cannot be explained by mechanical principles, which could never account for many facts exhibited by it. To take one example only, how can "the suddenness and abundance of the secretion of tears, excited by a momentary mental impression, be thus explained?" It has been referred to electrical action; but many

objections may be raised to this opinion. All glands open their excretory ducts either on the mucous membranes or on the skin. It is upon these ducts, or rather upon their extremities, that medicinal agents operate.

The manner in which the blood is altered, or converted into secreted fluids, has not yet been explained: some have supposed the change to be purely mechanical; others that it is as exclusively chemical: all that we can affirm with certainty is, that it is a result of a function of the organised and living substance. It certainly does not consist of mere exudation, but depends on a vital action of the secreting membranes: and there is no doubt that it is much modified by nervous action. As far, at least, as glands are concerned, secretion is subject to the nerves, and is much influenced by the emotions of the mind; a fact demonstrated by the quantity of saliva poured out, and the equally abundant flow of tears, when the glands furnishing these excretions are excited by momentary mental impressions. Another proof of the influence of the nerves on secretion, is the ceasing of the secretion of the gastric juice when the par vagum is divided. Sir B. Brodie's experiments, also, have demonstrated that, when the vagus and nervous sympatheticus are both divided, arsenious acid does not produce the copious secretion in the stomach and intestinal canal which usually follows its administration. The division of the spinal cord in the loins causes the urine to become limpid like water; whilst the depressed influence of the nervous system, in acute diseases, causes dryness of the mucous membranes and the skin: both are proofs of the influence of the nerves on secretion.

All the medicinal agents which operate on the excretory ducts of secreting organs, must be such as can exert an excitant power; but every excitant will not affect, indiscriminately, in the same degree, the whole of the excretive organs of the secerning system. Thus, if turpentine be taken into the stomach, in moderate doses, its influence will be most apparent on the kidneys and other urinary organs; that of mercury upon the salivary glands; of antimonials upon the cutaneous exhalants; and of squill in those of the bronchial tubes. Their action is, also, much modified by the extent of the dose, and by the condition of the body at the time. As the primary action of every medicine exerting an exciting power is at first local, if the dose be very large, so as to stimulate powerfully the tissue with which it is placed in contact, its operation is confined chiefly to that tissue, and the secondary effect, on some distant organ, which should follow small and repeated doses of the remedy, is not perceived. Thus, if spirit of turpentine be administered in doses of six or eight fluid drachms, it operates as purgative, and never reaches the kidneys. By affecting powerfully the motor nerves of the intestinal canal, it increases the movements of that organ, and is hurried so rapidly through it, that none of it is absorbed and carried into the circulation; which must necessarily take place before it can arrive at the kidneys. Mercury in large doses, again, stimulates the excretory ducts of the liver in the duodenum, bringing down so much bile that it operates as a cathartic also, and prevents the absorption of the remedy; whilst antimonials, in extreme doses, operating solely as counter-irritants on the mucous membrane, suspend absorption, and, consequently, display no action on the cutaneous exhalants, or, in other words, no diaphoretic effect.

As the influence of every excitant that operates on a secerning organ, augments the activity of the organ, it is evident that the effect of all medicines possessed of this property is to stimulate the activity of the gland, or the secreting follicle, and to augment the secretion, causing an evacuant result; and, consequently, although excitement be the first effect of the action of this group of remedial agents, yet the secondary effect is that of an opposite kind. On this account, it becomes important to regulate the action of such excitants, and to keep them within certain limits. If the object be to stimulate topically, and to produce motion at the same time that secretion is augmented, the strength of the excitant, or its dose, must be adequate to both effects; as that which is efficient on the motor nerve, is necessarily

abstracted from the nerves connected with the secerning function: when the latter only is required, the excitement must be kept within more defined limits. Although the secretion is at first augmented in quantity by the action of an excitant, this occurs only within a certain limit of the stimulant action. If it approach to or reach near that of inflammation, the state of increased action diminishes, and the secretion is altered in quality. When the secreting organ becomes relaxed, the secretion becomes watery and copious; when the tissue is thickened "by the deposition of the products of inflammation, the secretion formed by it is very scanty." When the quantity of one secretion is augmented, it always tends to diminish that of another; and it is chiefly upon this antagonism, that the salutary influence of certain substances depends. In noticing this law, however, we should be aware that the secretions must be of an opposite kind: for sympathy operates upon secreting organs, so that increased action in one augments action in all of the same kind; but those of opposite tissues antagonise one another. Glands sympathise with other organs:—thus, the liver sympathises with the brain; the mammæ with the uterus; the testicle with the parotids; the kidney with the stomach; and it is from a knowledge of this fact, that, on the occurrence of vomiting, in conjunction with acute pain in the kidney, we are enabled to ascertain the presence of a calculus impacted in its pelvis or its ureter.

Some curious and important facts are connected with the influence of rest, age, sex, climate, health, and disease, on the functions of glands; and, consequently, on the influence of medicines acting on glands.

Rest seems necessary for the function of secretion to be perfectly performed: and this is not confined to man and the warm-blooded animals, but it extends to insects. It is well known that bees, before swarming, suspend themselves for days like a curtain before the hive; the intention of which, as Huber ascertained, is a greater than usual secretion of wax for the foundations of the combs of the new hive. When they first form this curtain, the wax pockets of the bees are empty; but if a bee be caught when they take their flight, before beginning to work in the new hive, the wax pockets are more turgid with wax than at any other time.

(To be continued.)

CURE FOR STRYCHNINE.—It is alleged, on the authority of a resident in Geelong, that immersion in cold water is an almost instantaneous relief from the poisonous action of strychnine. The discovery was made in the following way: A favourite spaniel had partaken of some poisoned meat intended for the destruction of wild cats. In less than five minutes it became, to all appearance, a stiffened corpse, evidently suffering extreme muscular agony. The suggestion to immerse the body in a tub of cold water was immediately put into execution, and, to the utter astonishment of the assembled household, was attended with complete success, for within ten minutes of its first immersion the animal was restored to life.

NOTICES.

Dr. COFFIN commenced his course of Twelve Lectures on Medical Botany, at Sussex Hall, Leadenhall-street, on Monday, January 12th; at eight o'clock; and will continue them on each succeeding Monday, till the end of the course.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury Branch.

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All letters should be addressed, "To the Editor of the Botanical Journal, 134, High Holborn."

The real name and address of the writer of a letter must be given in confidence.

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COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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WHY AM I A MEDICAL BOTANIST?*

1st.—Because I conceive the present legalised practice of medicine a cumbrous, absurd, complicated, ineffectual, delusive, destructive, and illiberal one, armed with unjust power to persecute the innocent who will not yield to its arrogant and empty pretensions; and having narrowly escaped an *early grave* by the malpractice of being *bled*, *blistered*, *salivated*, *starved*, and *physicked* for a severe cold, which might have been removed by the Botanic Practice without reducing the strength of the body, within as many hours as I then suffered years.

2nd.—Because I am satisfactorily convinced, by many years' study, practice, and general observation, that instead of scientific progress to check disease, and diffuse useful medical knowledge, as might have been expected from the legal eminence given to the law-made *mineral doctor*, the course pursued has been the contrary. What little knowledge the people had, has been greatly diminished, and from sinister motives every restriction enforced, until the monstrous attempts at compulsory measures (read "Our Medical Liberties," by John Gibbs, Esq.) became a law, which remains a disgrace to the statutes of our land. Fancy the tooth-drawing and blood-letting barber, whose *striped pole* is the only *odd relic* of his former surgical skill, now a surgeon, *legally qualified*, joining with the *pot-carriers* of medicine, now *apothecaries* by *Act established*, both armed with the iron rod of the law, menacing you, fining or imprisoning you, if you do not let the former gentleman, with scab and lance stab, and put into the blood a bestial humour from a diseased *brute*, even though it may slay your only child, and the latter dose you, though it may be a *deadly one*—for, by law, to this hour are you thus restricted—and then say whether you are in a *land of freedom*, and how long will you remain ere you renounce this hidden work of darkness.

3rd.—Because Medical Botany is based on the unerring laws of Him who "causeth the grass to grow for cattle, and herbs for the *service of man*"—Psalm civ; and xiv., "The Lord hath created medicines out of the earth, and he that is *wise* will not abhor them." And it is an incontrovertible fact, that *mineral medicine* cannot assimilate with the *animal economy beneficially*, although its advocates reason hypothetically, and by chemical absurdities give a show of reason in its favour. If, then, herbs and roots, as food and medicine, be created by God, and are proved good for food and physic, containing nutriment and correctives, as appointed by the Fountain of Wisdom, who but the *unwise* would *despise* and *reject* them? The reader of these remarks may be in favour of metallic medicines, and think that even the poisonous preparations of minerals and vegetables are good as medicine: well, I believe God made nothing in vain, and I also believe that many chemical

* The opposition to the system of Medical Botany has induced Dr. Stowell, of Brighton, to write this article, which he has kindly forwarded for this Journal.—*Ed.*

compounds prepared by man, may be used with advantage in commerce; so also with poisonous plants, such as hellebore, good to destroy beetles; and thus everything is good in its proper use. I do not say you shall not be adorned with black teeth and lips by using nitrate of silver; that you shall not have your sore legs dried up, and the corruption driven into you beautifully with corrosive sublimate, to come out again from your nose to your toes; you may take blue pills till your gums are like sponge, your tongue large enough for half a dozen mouths, and your teeth determined to quit their lodgings, and your bones perforated like a honeycomb, with other mercurial preparations. But one thing I'll promise: never to take it, or give it to any one. If you want a looking-glass to see their effects, go to the graveyard and read the headstones; should you dread the silence that reigns there, look among the fair of your family circle, and see how many are complaining of *toothache*, and should some of them chance to laugh, observe, 'tis only a suppressed smile; the heart could not join—no, the aching nerves, the hollow and absent teeth (the havoc which such remedies have made), the pale or livid lips must be closed to conceal.

4th.—Because Medical Botany is a system of medicine which unmasks every system of quackery, both legal and illegal, and shows the nations of the earth a pharmacy which is of God, based on his laws; consequently, good without mixture of evil: it leads the thinking mind to compare the remedies it contains with those of other schools, and affords an opportunity to choose *life* or *death;* it agrees with the correct dietetics of the greatest minds that have illuminated our world; and it discards the errors, the absurdities, the contradiction, and the arrogant pretensions which are too commonly evinced by those licensed to kill. In fact, the legally qualified have a medley which they have gathered from all the quack pretenders of the dark ages, and the last three centuries very little added: some of these the Parliament has purchased from them dearly enough. Note the £5000 with which the Parliament bought a quack nostrum, to add to their knowledge, of one Mrs. Stephens, in 1773, to dissolve stone in the bladder, upon which they much depend to this day, but not finding it effectual, have repaired to the knife. Look again at the £30,000 presented to Dr. Jenner for introducing the fancied preventive to smallpox, which has proved to have increased skin diseases fearfully, and slain its myriads of helpless infants, and through it the slaughter of the innocents has been repeated, by gentlemen who have the audacity to call me a quack, because I happen to see through college mist and *hospital murder*.

Here, I may add, the curses of some cannot harm me, whose patients have come to me and found the *balm to heal;* while others have misjudged me, supposing that we, in disguise, use poisons, have, when opportunity offered, vilely insinuated and sneakingly carried away the medicine for analysis; but finding no such in it, have tamely said, "'Tis only hops in the mixture, and the pills nothing but assafœtida." Should the would-be wiseacre who ignorantly uttered this sentence read it here, let me apprise him that the mixture which he examined had no hop in it, and it would be well for the public if his medicine contained more hops and less *calomel;* and as to the pills, he knew nothing of them but what the nose of a dog might have detected, and had he acted as a gentleman towards me, as some of his own school have done, I should have treated him as such; and while I pity him, I sympathise more with those whose sufferings are not mitigated by his treatment.

5th.—I am a Medical Botanist because it furnishes a remedy for human sorrows at less than half the expense to all who embrace it; its saving powers being, like the Gospel, without money, without price, while its benefits are beyond all price. It seems to be the identical fulfilment of Dr. Radcliff's prediction, "that the whole science of medicine would one day be written on a single sheet of paper." However it may disappoint the "legally qualified" (in other respects *unqualified)*, it's pretty certain that its progress, aided by the confessions of the "*legally qualified,*" places it in such a position that the mountain of obstacles

vanishes like the mountain of snow before the rays of the orb of light. It would be tiresome to give a list of the contradictions of the "legally qualified," to show the fallacies of the law-made DOCTOR. Some, into whose hands this may fall, remember how many doctors were called to consult what could be done for a sick, wealthy friend, and how no two out of seven or ten agreed as to what could be done to save. How true, then, does this prove the words of the few whom I may quote! and were they merely matters of £. *s. d.*, we might place them among the common affairs of bad reckoning, and attribute the ignorance to want of schooling or natural abilities, and pass it: but, when we deal with *life* and *death*, not only the *price*, the *value*, but the known effect to restore, ought to be beyond *conjecture*—in fact, with mathematical *precision*, convincing even the incredulous, that its professors are *well schooled*, and have abilities commensurate with the important office of restoring health to the sick. Is it so? Let an occurrence of a neighbour who recently lived opposite me, answer. Not knowing that any one was dead in the house, I was surprised to see the shutters up, and inquired who was dead, and was still more surprised to hear that it was the little boy, about ten years old, who, a few days before, I saw in play with his little sisters. The Sunday following his burial, I met the father and two little girls, and asked him of what his son had died; said he, "of neglect and ignorance of the doctors."—"Who attended? Mr. ——, who said 'twas slow fever,' and gave him a little common rhubarb and jalap, I knew what it was; I had some better in the house; it did him no good, and my wife saw 'twas quinsy, for he could not swallow, *and told him so*, but he contradicted her, and gave him nothing else; so I went and fetched Mr. ——, who said *he was astonished*, and put a blister round his neck, and he died." If this were a solitary case, it may be passed in silence; or, had it occurred under the hands of any but the "*legally qualified*," having died in a few days, a coroner's inquest, and the *committal of a quack* for manslaughter, would have gone the rounds of the papers; but not so here—they were both "*legally qualified.*"

6th.—I am a Medical Botanist, and a practical one, because the public demand such as are qualified, whether on law grounds or on the grounds of right of choice, having used every available means for that qualification. I take my stand as one honoured with the titles of the school to which I belong. Other medical men have a surgeon's training; so had I. They have access to the hospitals, the dissecting-room, the amphitheatre for lectures, and the library; so had I, and paid for it, and am indebted to no man. While respectful to all who deserve it, and able to compare what I at first received with that which I now practise, and having the example of the wisest of men and the tradition of ages to back the value of the remedies I now use, I fear not the scorn nor court the smile of any. Not that I would be egotistical, for a vain man is generally the laughingstock of the reflecting, whether he be shielded by the monopolising law, or otherwise. Hear what the *law-made mineral doctors* say themselves, and draw your own conclusions, from which you may see how far they have strayed from the greatest of Botanic Physicians, Solomon, of whom a Jewish historian speaks in the highest terms, and the Bible proves that it was a subject not beneath his notice, for it says, "He spake of plants, from the tall cedar of Lebanon to the tiny hyssop that springeth out of the wall"—1 Kings, iv, 33—whose medicinal virtues, it is said, he effectually employed.

Place by his side the words of the mineral physicians, and say whether you have faith sufficient in its usefulness to aid it by Acts of Parliament, that no one else shall practise medicine from any other school but that from which these gentlemen were educated.

Dr. Dickson says, "Till the terrible system of collusion which at present prevails under the name of 'a good understanding among the different branches of the profession' *be exposed*, the medical art must continue a source of *destruction* to the many, and a butt for the ridicule of the discerning few."

Dr. Vicesimus Knox says, "After all that has been said in commendation of the

uncertain art of medicine, the most sensible physicians admit that it is to them uncertain whether it has done more *harm* than *good* to mankind, this fact being certain, that in the hands of the young, the rash and inexperienced, it is *dreadfully destructive* of the human race."

Dr. McCulloch, of Dumfries, says, "Medical men seldom get time to practise on the rich till they have *maltreated* and murdered the poor, or have got what is called experience; that at least eighteen out of every twenty British licentiates are not fit to practise with safety until they have gained experience in this shameful way, and that the poor themselves are massacred to make doctors for the rich."

Sir Evrard Home, a high medical authority, says, "More have been killed in fever by the use of wine and spirits than fever itself ever killed." And how many of our Brighton doctors are blind enough to continue this cruel practice!

Dr. Frank says, "Thousands are murdered in their quiet sick-rooms."

Dr. Magendie, the great French physician, says, "The most contradictory opinions pervade the whole length and breadth of the profession regarding the origin, the nature, and cause of disease, not merely the more complex diseases, but even the simplest to which mankind are liable; in short, a complete revolution awaits the medical profession."

Such is the present hope; it needs it; but can it be possible that such a wretched mockery to human woes, already countenanced by an unjust law, shall seek exclusive power under the guise of "Medical Reform?" Shall the British Constitution be outraged, her people shackled, and pass into a state of barbarism, to serve a mercenary few, who are already too eager to turn up the nose at every qualification but the *contemptible legal qualification*. If so, no means I can adopt shall be left untried to arouse the lethargy of the people on this subject of *life* or *death*.

INFLUENCE OF INTOXICATING AGENTS ON THE MIND.

(Continued from page 249.)

The term drunkard, however opprobrious, is still properly applied to all those who are accustomed to allay that craving for stimulants, which their abuse of the stomach invariably excites, by frequent recourse to them, so as to keep up a constant but not uncontrollable effect. This decent kind of drunkenness, however, leads to its own especial horrors; for when those who are subjected to it are deprived of the exhilarating and delusive cordial, they are apt to fancy and to feel a thousand evils which visit the confirmed hypochondriac from other causes with comparative mildness. A man thus unnaturally excited, when not under the influence of stimulants, is apt to feel as if he might expect death every moment; he seems to see the enemy close to him, and he looks and expresses himself as if grasped by the cold hand of some mysterious presence. I have seen what I describe—the decent drunkard's hypochondriasis. He starts, he roves about wildly, he breathes laboriously, he struggles for life, as if he grappled with a murderer, and yet there is nothing to annoy him but himself—nothing wrong but the nerves he has abused. Sometimes these horrors seize him in bed. He springs up as if he were elastic, and had been suddenly released from the pressure of some great weight; but it is only from an internal sense of suffocation that he tries to fly. He gasps for air as if he could never have enough, and yet he breathes deeply. The fact is, his blood is poisoned, and cannot be duly vitalised, and therefore his brain reels with a feeling of vacancy, and his senses are all full of confused sensations, because the fine fibrils of their nerves are thrilling under the impressions of noxious atoms circulating amongst them; there is a terrible wringing in his ears, and a multitude of frightful and indescribable objects crowd around his aching eyeballs, which he cannot refuse to see, for they are more visible in the darkness than in the light, and the light he cannot bear. He sinks for want of food, but the sight of it disgusts him; and the burning pain in his stomach renders the mildest thing intolerable there. He cries for drink, but water does not cool him, nor quench his thirst. Nothing but a return to the Circean chalice can for a moment charm away the misery of life, and that only fixes a curse more deeply on his soul. But the agonies of

aggravated indigestion, jaundice, dropsy, and diseased heart, are but a small part of the catalogue of ills to which those are especially liable who addict themselves to dram-drinking and flips. In many cases a peculiar paralysis comes on; the legs and feet become as smooth as polished ivory, and so tender that the weight of a finger will make a man shriek. All power over the muscular system is gradually destroyed, and the wretched being lies, it may be for years, at the mercy of his attendants, quite incapable even of feeding himself. The mind, in these cases, being nearly idiotic, it is difficult to discover whether the suffering is really so great as it appears, from the cramps of the extremities, the convulsive twitchings of the countenance, and the moans and exclamations of the patient. It is, however, certain that these symptoms increase in violence until total darkness closes the horrid scene. Long before death arrives, however, the patient talks aloud of his former orgies, and reacts, in thoughts and words, his solitary indulgences. Thus the degradation of his soul becomes visibly complete.

The abuse of sensual passion usually induces that feeling of exhaustion under which the temptation to take stimuli inordinately is strongest. Then the indulgence becomes almost irresistible; and, of course, instead of quieting the nervous system, it only substitutes one excitement for another, and brings the soul and body more thoroughly under the thraldom of morbid sensation, before the tyranny of which all sense of honour and morality at length is lost, and the miserable sufferer, while he cowers, like a madman, under the threats or persuasions of those about him, will, yet, rob his children of their bread to obtain a few more doses of the poison of which he is dying; and when disease confines him to his deathbed, he will bribe his vulgar nurse with his last shilling, and beseech her with his last breath, to procure for him another of the fatal draughts. Can, then, the causes of this most pitiable insanity be too fully studied, or too fully met? Let every one who reasons see that he, at least, assists not to perpetuate the evil by encouraging the habitual use of stimulants; and if there be, in the doctrines and the disciples of political wisdom, morality, and religion, any power to stem that torrent of popular iniquity, surely here, in this country, and about our homes, we find sufficient scope for its fullest exercise.

The benefit of habitually abstaining from *artificial* stimulants can scarcely be better expressed than it has been, by some sudden converts to a simple regimen, in the name of hydropathy. From their rapturous language, describing their delights in the feelings of a new kind of life and vigour, one might suppose them to have escaped the misery of a depraved existence, and to have found themselves, unexpectedly, in some poetic paradise. But there may be intemperance even in the use of water. The ecstasies of hydropathic converts, however, is due as much to excess of enthusiasm as to excess of drinking. Active exercise in fresh air, and a free use of cold water, constitute a plan which every savage, unbewildered by quackish mysteries, knows to be wisest, discretest, best for securing the blessings of bodily health. But let moderation be known in all things, and despise not the wisdom of Solomon, who tells us that wine has its uses; and strong drink is more suitable than cold slops and wet sheets for a man with a flagging pulse and a sinking heart. A deluge not only renovates, but also destroys; and the Maker of man never designed him to be amphibious, nor to keep his functions in forcible action, like a watermill under a constant stream, but to enjoy life under a wise use of all that is good, since obedience to divine law allows of no extremes; and temperance implies *in mediis tutissimus*—an equal danger both from abstinence and excess.

Much might be said concerning the use and abuse of tea and coffee; but common sense is beginning again to prevail, and, therefore, we expect that the numerous nervous disorders due to excessive indulgence in these warm drinks, will gradually wear away under a more judicious use of them. Chemistry seems clearly to have proved that the active principles of tea and coffee are precisely similar, and that their elements exist in such combination as, when moderately

enjoyed, to favour the mental action of the brain with less risk than under other stimulants; therefore, we can discern the wisdom of the Providence which has led to the almost universal employment of these substances in civilised society, and especially among those whose minds are most active. Therefore, let charity and trust in God's goodness command our grateful thoughts, and thus put scandal to flight, when we socially sip from "the cup that cheers, but not inebriates."

PERUVIAN BARK

It is not an easy matter to interest the public in an essay on drugs; but quinine is unfortunately a household word in every Indian family. The price of grain is a question which seldom gives anxiety to the poorest among us; but though absolute poverty may be almost unknown, we are accustomed to look on fever as one of the common incidents of daily life, and the very possibility of a quinine famine becomes suggestive of great public calamity. It has been known for many years that the capacity of the Peruvian forests for supplying the world with cinchona bark was not unlimited. On the other hand, the demand for quinine has increased, not only steadily but progressively, in England and elsewhere, as well as in India. The reputation of the febrifuge grows. It is administered in scruple doses where it was formerly administered by grains. It is used largely, as on the late Niger expedition, as a prophylactic, where it was formerly used but sparingly as a remedy for the actual fever. Every new gold-mine dicovered in California or Australia, every new settlement established in Oregon or in New Zealand, every new lodgment effected by civilisation on the frontiers of barbarism, acts directly on the quinine-market. And yet the supply from Peru, at the best stationary, is most probably rapidly diminishing. The naturalisation in India, therefore, of the quinine-yielding cinchona-tree is a question of philanthropy as well as of agricultural economy. The Dutch have lately imported the plant into Java with apparent success. It has even been introduced into India; but the half-dozen plants which Mr. Fortune brought out in 1854 perished, partly perhaps from ignorance, partly because the experiment was tried on too small a scale. It has become necessary to renew the experiment, and to surround it with the conditions likely to insure its success. In South America the quiniferous cinchona is limited to the Bolivian, Peruvian, and Columbian Andes, from latitudes 20° S. to 10° N., and to altitudes ordinarily varying from 1,500 to 10,000, but sometimes mounting to 14,000, and, even under the equator, to 18,000 feet. The best bark is found in dry, rocky situations, at great heights and in the coldest regions. In low and hot valleys the plant grows—it even grows luxuriantly—but the medicinal value of its bark vanishes. It is thought that the conditions thus indicated may be supplied by the hills of certain parts of India, such as the mountains behind Chittagong, the hilly tracts around Darjeeling, the upper spurs of the Neilgherries, and the higher elevations of the Western Ghauts. In order that the experiment may be fairly tried, the Supreme Government has resolved to move the Court of Directors to send an experienced botanist to South America, empowered to select a cargo of plants for transport to India. Propagation by seed has been tried with such ill success that it is considered out of the question. All meagre attempts to transmit cuttings in small quantities have been found to be the worst economy. It remains then to follow the example of the Dutch, who by sending from Batavia for a shipload of plants have already attained results which seem to promise final success. The Court of Directors can hardly refuse to listen to the earnest representations which have been made by the Indian Government. The expense of the enterprise will doubtless be great, but at present the cost of quinine in the Indian hospitals is calculated by lacs of rupees, although it is a well known fact that quinine is seldom administered in hospitals where arsenic can be made, however ineffectively, to take its place. The introduction of the cinchona-tree would not only cheapen the most valuable of all known drugs, and place it within the reach of a native population which is fever-stricken through half the year, but it would add a new industry to our hill-sides. Slopes unsuited to the growth of

tea would grow cinchona. New modes of culture would thus gradually encroach on lands which, in spite of their unquestioned fertility, have hitherto been untilled because they are not fit for the growth of cereals. The great problem of the colonisation of India by Europeans will never be fully carried out, for the land is but limited on which Europeans can live and thrive; but, unless our Indian mountains were upheaved for nothing, they seem to have been destined to give support to large colonies of settlers from among that class of Europeans which, while unable to return to England, is unwilling to live and die in the plains of India. The class is even now a large one, and it is increasing from day to day. It numbers already hundreds of families, and the hundreds will swell to thousands when room for patient agricultural industry is found in a congenial climate. —*Friend of India.*

THE LADIES AND "THE SEASON."

The Christmas holidays are drawing to a close: the parliamentary recess is near its end: parliament and "the season" will soon open upon us; and it is time to ask the question (if it is to be asked at all) whether the parties concerned in the great event have prepared themselves for the duties they ostensibly undertake when they come to London "for the season." Ministers, of course, are ready with their measures; and members of the Commons have communicated with their constituents, and meditated their political course for the session. The various exhibitions of the metropolis, from the great theatres to the sixpenny shows, are organising their forces for the spring duty and profit, which eclipse all the rest of their year. The religious and benevolent societies are working their staffs, getting up material for their reports, and looking forward to their field days in May with wise foresight and preparation. How is it with the patrons and congregation of those societies, who feel at least once every year that they have a duty to perform to the sinning and suffering part of the society in the heart of which they live? To put one single case clearly—the wives of the noblemen and gentlemen of England hear and believe, every May and June, that there are young women in London who by scores and hundreds sink in sickness, in blindness, in madness, in death, from overwork at the needle. The facts are so well known that readers skip the detail of them, because they are perpetually recurring, and there is nothing new to be said. Every year, at the end of the season, when it is too late to do anything but give money and pitying sighs, our wives and sisters hear with grief how prostitution is fed by constant accessions from starved or overwearied dressmakers. They hear that eye dispensaries and blind asylums would be required for overworked dressmakers, if there were no other class. They are told of wide varieties of misery, from ruined digestion, from a strained nervous system, from a vexed and worried mind—from, in short, an infringement of the first laws of nature in the case of needlewomen—and then, moved by compassion, they give money, and perhaps time and effort, to promote the nursing of the sick, and the maintenance of the blind, and the reformation of the poor creatures who have been driven into the streets, or tempted to sinful idleness by a stress of oppression which it can hardly be expected of human nature to bear. Are these ladies remembering now, at the right time, that the chief responsibility for this kind of suffering rests with the ladies, who are full of compassion for it when it is too late? Every year they are told that it is the crowding of almost all the dressmaking into one quarter of the year, which causes the long hours, the crowded workrooms, the overstimulating diet, the universal hurry and worry, from February till June, which regularly send a crowd of victims to the hospital, the brothel, the madhouse, and the grave. Every year the ladies who help to form the great London season wait for the newest caprice of the sovereign leader of fashion, whether foreign empress or indigenous belle, and then all rush together to the dressmakers, with their multifarious orders, making an impracticable speed the condition of their custom. Do ladies mean to do the same this year? Are they now waiting

for some latest patterns from the dictators of fashion before they make up their minds what they will wear? If so, let them at least abstain from showing themselves at the May meetings, and from pretending to be charitable six months hence to those whom they are dooming to ruin now. The offence is bad enough, without the hypocrisy which would atone for it with sighs and sovereigns. Some may start back from the word hypocrisy, and plead that the pretty ladies, with their pretty impatience, act in ignorance. If so, such ignorance is their crime. Of the sufferings of the London dressmakers they are not ignorant. Nobody is ignorant of that fact, in London or in the country; and as to the rest, every woman may know and ought to know, how long it takes to make a dress. It is a common observation that blind persons are apt to be in an unreasonable hurry, from their inability to observe how work goes on; but every lady may and ought to know, by observing her own maid, if by no other means, what a day's work at dressmaking really is. A moment's consideration of this, and a slight calculation as to the number of dresses required for any drawing-room, or for any dozen ladies for the London season, would show at once what a stress must be laid on the dressmaking establishments in London for the ensuing four months, in the prospect of which many a young heart is sinking now. Then, why do not thoughtful and kind-hearted women give their orders immediately before coming to town? Why not give them as soon as the fashions for winter are divulged? There is never so complete a revolution in fashion between one month and another as to antiquate a new dress immediately; and if the one or two most important were left till nearer the drawing-room, why should not the others be ordered before the stress begins? Are the ladies thinking about it?—that is the great question. And if they are not, are their fathers and husbands reminding them of it? As long as the health, virtue, and life of industrious women are of more consequence than the consummate newness of the dress of idle ones, some way of preventing the sacrifice of the greater to the less must be possible. The responsible parties, the fine ladies and their guardians, must find it out, or be prepared to answer for the fate of their victims.

It cannot be expected of us to expatiate on the dresses of the time, as reported from Paris; but we can see the pictures of them in illustrated newspapers and in shop windows: and every man with eyes in his head can perceive that skirts of such dimensions, with row upon row of flounce, each flounce feathered, flowered, laced or otherwise trimmed, with row upon row of trimming, must take an enormous number of stitches, in comparison with those which we remember, which were of a reasonable length and breadth, and plainly made. As well as we can judge, they were far prettier than any we see now. When we remember the cost of the difference, the hot, shaking hands, the dim and aching eyes, the throbbing brains, in the rooms full of workwomen, we certainly think the present fashion as barbarous as it is ugly. If an outcry is raised against that last word, we will venture to whisper a plain truth to our lady readers:—that we do not know a man of any age, or any order of taste, who admires the present fashion of female dress. We are not thinking particularly of husbands who have to pay the bills, or of fathers who sigh to see their daughters make themselves ridiculous. We speak also of mere observers—of men of taste, versed in art, and cognisant of beauty wherever it exists. As far as we know, such men, and all men, agree that there is no beauty in a style so far removed from nature and reason. The pernicious confinement of the waist, in painful contrast with the profusion of petticoat; the exposure of the head to the wintry air, and of the face to the common gaze, in a state of society in which women profess to wear bonnets when they go abroad, are shocking to good sense and taste; and so is the amount and variety of things put on. Our ladies, whether in the open air or the ball-room, look like walking wardrobes, from the weight they carry, and the amount of furnishings, one on the top of another. Both the fundamental principles of dress forbid this. Such a costume neither discloses

the general outline of the form, according to the one principle, nor possesses the warrant of manifest or ostensible use, according to the other. Nor is there any excuse of classical association or special convenience; or, indeed, any pretence but mere whim, for the fashions which have offended all rational people for the last two or three years. It is believed by many that all things recur in cycles, from periods of the highest wisdom to the lowest folly of men. It certainly seems as if the extremest folly in dress had come up again, in an age which prides itself on its doctrine and fact of progress. If it be true, that, as the *Lancet* says, a free use of belladonna, to give brilliancy and fascination to the eye, is a "fashionable abomination" of the day, there was certainly no period before the popularising of physiological facts when more offences were committed against health, by means of dress, than at present. The days of hoops and tight-lacing, of powder, rouge, and enamel, were not more fatal to the health of the ladies of England than are the practices of the passing hour. The weight hung from the waist, instead of a reasonable dependence from the shoulders—the exposed head and chest—the treatment of the eye, the hair, and the skin, from false notions of beauty—are a disgrace to the knowledge and judgment of our time. When we have to add the consideration of unpaid debts, from the prodigious expensiveness of dress, and the oppression of the working class from its elaborateness, caused by the selfish thoughtlessness of our belles, besides a multitude who have been or would fain be belles, we do not see what can be said for the heart, any more than for the civilisation, of a generation which is sufficiently forward at least in its pretensions. We must repeat what we have had occasion to say before, that if Englishwomen do not use to better purpose the customary discretion afforded them in their personal affairs, the remedy lies with the fathers and husbands who do not choose to see their households making fools of themselves, to be loaded with debt, or to be subject to remorse when they hear, at the end of the London season, of the woes of needlewomen, with their inevitable consequences—which are at once most painful to private feelings, and formidable to social morals.—*Daily News.*

GLANDS AND THEIR USES.

(Concluded from page 252.)

With respect to age—in the fœtus, the liver and the kidneys are comparatively larger than in the adult; they are also more separated into lobes, and more largely supplied with blood; but yet they possess no activity, scarcely exerting any secreting power until after the birth of the infant. After birth, the kidneys secrete a large quantity of urine, and the lachrymal gland, which is excited at this period of life by every passion, secretes tears. In adult age, the testicles, which were inert in boyhood, become active: in females, the mammæ swell, and the nipple becomes erectile on the slightest touch. From thirty to forty years of age and upwards, in both sexes, the liver is in great activity, and those diseases which are termed bilious are most common. It is true that mental affections of a distressing kind, such as ambition, hatred, jealousy, tend to induce an irregular action in the liver: but, independent of these mental influences, age powerfully affects it. The salivary and the mesenteric glands are frequently diseased and the spleen and the kidneys become more liable to take on a morbid action as life advances; in old age, the glands become hard, and the secretions are altered; the action of some glands, as the testicles, the mammæ, and the uterus, ceases; whilst that of others—as, for example, the mucous glands—is greater than ever; hence the rheums and catarrhs of old age. The secretions also become more sapid and odorous, and communicate these properties to the glands.

Sex, even independent of those glands which characterise the sexes, influences glandular secretion: in women the lachrymal glands are more easily excited than in men; women consequently weep more frequently, and for slighter reasons, than men.

Climate influences glandular secretion: it is more regular and active in temperate climates than in either very cold or very warm regions of the globe.

Season also influences secretion: that

of the cutaneous system is increased in summer, whilst that of the kidneys is diminished; and, in winter, the cutaneous excretories are, as it were, shut up, whilst the action of the kidneys is augmented, and the quantity of urine increased.

It is almost unnecessary to remark, that, during health, the functions of the secerning systems are uniform and regular; but disease varies them in a thousand forms, and destroys the organisation of the glands themselves. In hysteria, the kidney being affected, the urine is limpid; yet, as soon as the paroxysm is over, it returns to its naural state; in epilepsy the saliva is more abundant, yet it is thicker and more frothy than it is in a state of health: and some glands in a diseased state of the habit, are excited by every change in the system, both corporeal and mental. In disease, also, one gland has its secretion sometimes augmented at the expense of another: in the same state, great local and even general excitements diminish glandular activity: thus, in extensive ulcerations, and in dropsy, it is asserted that the system is affected by mercury with great difficulty; but my experience is contrary to this opinion.

With repect to the secretions themselves, they have been arranged by chemical physiologists according to the substance most predominant in each secretion; thus, Dr. Bostock arranges the perspiration and pulmonary exhalation under the head of aqueous; the membranous parts of animals under albuminous; and the saliva, gastric juice, tears, and semen, as mucous secretions. He has also formed classes of gelatinous, fibrinous, oleaginous, resinous, and saline secretions. It is not my intention to criticise this, or any other arrangement of secretions. The excreted fluids are, generally speaking, of a more compound nature than those which are retained for the purposes of the system. According to Berzelius, they all contain a free acid, the lactic; and in the urine this is united with the uric. Urine, he remarks, contains only a single peculiar characteristic matter; but milk has three—i. e. butter, curd, and sugar of milk—which, however, seem to be produced by different organs, that mingle their fluids in the same receptacle. "The perspired fluid appears to have no peculiar matter, but to be a very watery liquid, with scarcely a vestige of the albumen of the blood; and, in short, is the same as all the other excretory fluids would be, if deprived of their peculiar matter." To proceed further with these remarks is unnecessary: I have only to add, that, whatever is the cause of secretion, or whatever the nature of the secreted fluid when once separated from the blood, it cannot be again introduced into it without being productive of disease and danger. Bichat injected bile into the jugular veins of a dog, and found that it quickly proved fatal: he also injected urine into the same vessel; the dogs were rendered ill, but did not die. When the secretions are re-absorbed, the same striking effects do not follow, but the health is impaired. Now, the question may be asked, what is the application of this information to our subject—the operation of vital agents, as remedies, on the secerning system? One answer only can be given—that which must naturally suggest itself: that the action of no agent upon the animal body can be correctly understood without a knowledge of the functions of the part to be acted upon, as well as of the qualities of the agent to be employed. To illustrate this by an example—suppose a patient, in whom the complexion is sallow, the albuginea of the eye tinged with yellow, the urine of a deep orange colour, the pulse labouring, and the mental faculties oppressed: I conclude that some cause has either obstructed the excretion of the bile, or that this secretion has overloaded the biliary ducts, and is again absorbed into the circulating mass. How is this to be overcome? If I know that, by stimulating the orifices of the gall-ducts, I shall not only excite that action in these canals which is necessary to empty them of their immediate contents, but also communicate a new action in the gland itself—which, by the increased activity of its secreting powers, will produce a thinner or more fluid bile, less likely to remain in the ducts, and better adapted for the ultimate purposes of the economy—and if no pain be present to indicate that the obstruction is a biliary calculus, I can proceed with a rational expectation of success in relieving the disease.

To influence the secretions, medicinal

agents must exert an excitant power; but every stimulant will not affect, indiscriminately, the whole of the secerning system. Thus, if turpentine be taken into the stomach, its operation will be most apparent on the kidneys and urinary organs; if mercury be introduced into the system, the salivary glands show most decidedly the extent of its action; and, if the remedy be an antimonial, it is upon the cutaneous exhalants that we expect it to operate. This action is also much modified by the extent of the dose; for, as the first effect of every stimulant is local, if the dose be sufficiently large to stimulate locally to a certain extent, the result is seldom that secondary effect which is the consequence of smaller and repeated doses of the remedy. Thus, if turpentine be given in doses of six fluid drachms or a fluid ounce, instead of twenty or thirty minims, the kidneys and urinary organs are not affected, because the remedy, stimulating powerfully the motor nerves of the intestines, is carried through the bowels without being absorbed, and never arrives at the kidney: and the same is the effect of mercurials and other excitants; which, in moderate doses, pass into the circulation and operate on particular glands, or generally on the secerning organs.

As the effect of every stimulant which operates on glands secreting an excrementitious fluid is to increase the activity of the gland, it is evident that the effect of every stimulant of this description must be evacuant; and, consequently, although excitement be the first result of the action of such remedies, yet their secondary effect is undoubtedly that of an opposite kind.

TO PURIFY CORRUPTED WATER.

To the quantity of water intended to be purified, add as much charcoal as may be required to deprive it of its bad smell; and to prove that the quantity is sufficient to cleanse the water, a small quantity of it may be passed through a linen bag three or four inches long. If the water thus filtered has a turbid appearance, a fresh quantity of charcoal must be added till it becomes perfectly clean. If diluted oil of vitriol, or any other acid can be procured, a small quantity should be added to the water before the charcoal powder is used, the quantity of acid being regulated in proportion to the state of putridity in which the water is found, and should be added in a quantity only sufficient to give an acid just perceptible to the taste. If the water be merely intended for dressing meat and vegetables, instead of acid, such a quantity of salt as would have been proper for seasoning the article, may be employed. Saline substances, like acids, hasten the effects of the charcoal powder, but by making use of acids a much less quantity of charcoal will be required. In the same manner, to improve the taste of those springs which have naturally an hepatic flavour, and are therefore unpleasant to use, nothing more is necessary than to filter them through a bag half filled with powdered charcoal. If such waters are not very much loaded with mucilaginous particles, the addition of an acid will not be requisite.

VARIETIES.

Let me especially recommend to a young wife a considerate attention to whatever her husband will require *when* he comes home, *before* he comes home, in order that, on his return, she may have nothing to do but to share in the comfort and enjoyment for which she has provided, and may not be running about after his usual and reasonable requirements, exposed to his reproaches for her negligence, and to those of her own conscience, if she has any.—*Home Truths for Home Peace.*

Ivy on Buildings.—It is a mistaken idea that ivy renders a structure damp and hastens its decay. On the contrary, nothing so effectually keeps the building dry, as may be seen by examining beneath the ivy after a rain, where it will be found that the walls are dry, though everything around them is deluged with wet. Its exuberant and web-like roots, issuing as they do from every portion of the branches on which it grows, bind everything together that comes within their reach, with such a firm and intricate lace-work, that not a single stone can be removed from its position without first tearing away its protecting safeguard. In proof of this we refer to ruins of ancient castles and buildings; for while in those parts of the structure that have not the advantage of this protection, all have gone to utter decay; where the ivy has thrown its preserving mantle, everything is comparatively fresh and perfect, and oftentimes the very angles of the sculptured stone are found to be almost as sharp and entire as when they first came from the hands of the builder.—*American Agriculturist.*

Cure for Hiccups.—Travelling some time since by railroad from Colombus to Baltimore, I took my seat immediately in front of a gentleman who was suffering under a paroxysm of hiccups to a degree that I had never before witnessed. In a few minutes a person appeared from the end of the car, and took a seat behind him, when he said —"Sir, can you tell me what is good for the hiccups? I have been afflicted in the way you see me since yesterday noon, and have had no rest or relief from my physician, to whom I have applied for assistance; I am worn out with suffering." To this the person replied—"Sir, I will cure you in less than two minutes by the watch. Have confidence, for I am sure I can do it. Hold high above your head two fingers of your hand; lean back in your seat, open your mouth and throat, so as to give a free passage to your lungs, breathe very long and softly, and look very steadily at your fingers." In less than the time specified the cure was performed, one hiccup only occurring during the trial. The patient could not but express his gratitude, whilst the practitioner only extracted from him, as a fee, the promise that he would extend the knowledge which he had imparted as freely as he had received it, assuring him that he would never be disappointed in the result. We were all struck with the fact. Since then I have often had occasion to practise upon patients in the same disorder, and never without the most signal success.

Close of Life.—Old age, "made lowly wise," ought to be contented with the levels of life. They are not necessarily flat; and, if well chosen, are neither stale nor unprofitable, but rich to the last with "fresh fields and pastures new." Besides, strewn as the humbler paths before our feet may still be with all manner of flowers and herbage, no law obliges our eyes to be always resting even on their terrestrial beauty; we have yet the privilege and the power of uplifting them to the stars. On its way up to heaven, our vision may yet gather the loftier glories of earth. A melancholy grandeur invests the precipices we must climb no more; and there is something awful in those luminaries, while in the clearest nights they seem somewhat dim now to our sight, the mist being not over them, but the orbs that gaze on the Bright Obscure. All men become soon reconciled to the inevitable change, in which there is forewarning, but no dismay. It comes upon us then so imperceptibly, that but by comparisons made in the memory, we are often not aware of the altered aspects of all things in life and nature. In infancy, the moon appears something fair and far off in the sky, and to look on it sometimes stills our eyes through their tears. In boyhood, the joyous globe, in its own independent being, is not thought to borrow its lustre from the sun. In youth's shining prime, we encircle her with love-dreams as with a tender halo, or with the glow of our passion vivify the sole Queen of Night. Into the meditative mind of manhood, soberer and more solemn fancies flow from the Silver Urn. And as we feel ourselves nearing the close of our mysterious existence, with what sublime conviction that our spirit, like her, will arise again in a cloudless clime, does Religion behold the moon dropping happily behind the mountains!"—*Professor Wilson.*

The Cook.—A cook, to be perfect, should know a little of most sciences, have a taste for the fine arts, and be capable of modelling and drawing; then, by daily practice, he becomes familiarised with culinary chemistry, and with the medical properties of the viands at his command. Though many say that a good dinner can be dressed without the cook possessing the foregoing knowledge, yet it is also said the artist in whom those qualifications are combined becomes the most perfect in his art. To these qualities are to be joined those of activity, cleanliness, cool-mindedness, vigilance, firmness, and discretion. In fine, the culinary art, as practised by the *artiste*, calls for such knowledge as is not found in the other professions ranking higher than his in the social scale.—*The Household Manager.*

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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BLUNDER POISONING.

Human life is at all times, and under all circumstances, too valuable to be trifled with, or to be jeopardised by the inexperience, ignorance, or carelessness of druggists' apprentices. It is, however, extremely painful to find that these fatal blunders are becoming more and more frequent. There are legitimate grounds for fear that many of these cases pass entirely unnoticed. A deleterious drug is sometimes given across the counter, and the unhappy patient continues to linger on for a few weeks, or even for a few months, before his symptoms assume a fatal appearance, and, on account of the length of time that has intervened, the real cause of his malady and death is lost sight of, and he is interred; the certificate of his death setting forth that he has died from some one of the numerous diseases which are found in the medical nomenclature. To those who understand the science of toxicology, or the properties of poisons, it is well known that some of these destructive agents may be taken without producing any immediate, palpable results which would create alarm; but they insidiously work themselves into the constitution and damage the springs of life, induce protracted disease, and hasten the mortal crisis. Much of the debility of childhood, and of riper years in many instances, may be traced to the injudicious administration of medicine at an early period of infancy.

Health is dependant on the vital heat and the purity of the blood. Whatever tends to injure either of these, diminishes the physical power and the healthy appearance. It is, therefore, most important that mothers, to whose care is mostly entrusted the health of their offspring, that they should exercise the utmost vigilance and guard their children against those drugs, which are so freely sold by chemists, and which greatly lessen the vital heat and deteriorate the character of the blood. Many of the patent medicines produce these effects, especially those which make pretensions to relieve the diseases and sufferings common to infancy. We have analysed some of those medicines; and, although we admit that they may, in some cases, afford temporary relief, yet we are bound to record our opinion that a moment's ease is sometimes bought at the high price of years of misery. Nurses and mothers are highly culpable in sending to the druggists upon the appearance of any and every little ailment which may befall their little ones. It is an evil to be deprecated that druggists and their assistants should be allowed to prescribe at their discretion some of the most deadly poisons that can be found in the mineral or vegetable world; but the surest and shortest way of putting an end to this practice is, for the public generally, and for mothers in particular, to withhold the encouragement they have been accustomed to give. We know that parents, who read these remarks, will exclaim, "What, then, are we to do when our children are suddenly attacked with disease, since we cannot see them suffer and do nothing, and *we* do not know what is the best medicine to administer in every case which may arise?" We fully sym-

pathise with parents in their anxiety for the health of their children, and particularly when children are suddenly attacked by diseases which have in a few days hurried thousands of little innocents out of the world; but, in reply to the question, we say that every woman, who has the prospect of becoming a mother, should make it her study to know how to treat diseases promptly and efficiently. Every mother should have Dr. COFFIN'S "Guide to Health," carefully study the symptoms of the several diseases as they are there described, and immediately apply the appropriate remedies whenever any given symptoms may appear. Some of the most valuable medicines should always be kept in every house where there is a family, so that at any time, if required, they may be administered. We know many children, now healthy and vigorous, who in all human probability would have now been in the cold grave, had they been left to the tender mercies of the allopathic doctor, or the bungling treatment of some neighbouring druggist. The parents of these children always have medicines at command; and their diligent study of the Botanic System qualifies them to administer the most efficient remedy with the utmost promptitude. These medicines can never injure, as there is no poisonous herb recognised in the whole of the Medico-botanic Science. They can also be had at a very small cost, and are far more useful than the high-priced nostrums vended by druggists.

While we are advocates for the free-trade principle in every thing, not excepting medicine, yet we have learned, with some pleasure, that the legislature contemplates a speedy measure to put down the system of blunder-poisoning, which has been allowed to go on too long without any legislative interference. It is the boast of Medical Botany that no case of poisoning has ever taken place, or ever can occur, in connection with its practice; but the cases are numerous in connection with the allopathic system. We furnish our readers with one, and the great lenity of the judicial verdict which was recorded. Every reader will see, that the vendor of poison, though death be the consequence, is allowed to escape with comparative impunity. The whole community is interested in this subject, and we hope our readers will profit from this article.

The following is the case alluded to, which we extract from a daily paper:—

Joseph Burrows, a young man of gentlemanly appearance, surrendered to take his trial for the manslaughter of William Marcauley.

Mr. Metcalfe, in his opening speech for the prosecution, said, that the inquiry the jury were about to enter into was one of a very melancholy character, because the death of one individual was involved in it already, and undoubtedly the interests of the prisoner, who was a young man of good character and of great respectability, and who, at the time of the occurrence, occupied a highly respectable position in society, were also deeply involved in the inquiry. He then proceeded to state that the prisoner, at the time of the occurrence, was assistant to Mr. Budd, a chemist, at Brompton, and the deceased was a respectable tradesman residing in the same neighbourhood. It appeared that, on the 27th December, the deceased felt slightly indisposed, and he sent to the shop of the prisoner's master for an ounce of castor oil, and the boy who was sent on the errand was served by the prisoner, and he took back with him to his master's house what he conceived to be castor oil, and the unfortunate deceased took the greater portion of it. He was almost immediately seized with convulsions, and although a medical man was sent for directly, his aid was of no avail, and he died shortly afterwards. A *post-mortem* examination of the body took place, and it turned out that the death had been caused by the administration of prussic acid, and upon the remaining portion of the oil in the phial being analysed, it was found to contain a considerable portion of that ingredient. The learned counsel, in conclusion, said that it was under these circumstances that the prisoner was charged with having by his gross negligence caused the death of the deceased.

Witnesses were then examined, who made out the statement of the learned counsel for the prosecution. It appeared that at the time the boy went to the shop for the castor oil, the prisoner was

engaged in making up a lotion for the eye, which should have contained a drachm and a half of prussic acid, and it was suggested that he had by mistake put the prussic acid into the castor oil, instead of the lotion, as the latter, on being analysed, was found to contain only a most minute portion of the acid. The boy, however, who fetched the castor oil was only enabled to state that he saw the prisoner take down two bottles of a large size, and take his phial to the part of the shop where prescriptions were made up, and he then saw him go to a cupboard and put a book in it; but he could give no information from which bottle the prisoner poured out what he gave him in the phial.

Mr. Budd, the prisoner's master, said that on the day of this occurrence the prisoner had to make up an eye-lotion that should have contained a drachm and a half of prussic acid, and he appeared to have made an entry in the book to the effect that he had prepared this lotion.

This witness appeared to answer the questions that were put to him by the counsel for the prosecution with some reluctance, and seemed to treat the matter very lightly, Mr. Metcalfe frequently requesting him not to fence with the questions that he put to him, and also complaining of his laughing while giving his evidence, observing that the question under discussion was not one that ought to be treated in such a manner. He stated that prussic acid and all other poisons were kept in a cupboard by themselves, but very little information could be obtained from him as to the contents of the bottles that were upon the shelves.

Serjeant Ballantine, in his address to the jury for the defence, said, in point of law, he would not deny that if any one, by gross negligence, caused the death of another, he would be guilty of manslaughter, but he asked the jury with great confidence what evidence there was of there being any such gross negligence in the case before them. They had heard the evidence of the master of the prisoner, and the statement he made with regard to the manner in which his business was conducted. He did not know what inference the jury had drawn from these statements, but, for his own part, he must say that if he wanted a prescription to be made up, he most certainly should not go very far out of his way to have it made up at Mr. Budd's shop, and it appeared to him that nothing was more probable than that the prussic acid which had caused the death of the deceased had got into the castor oil by accident. He then proceeded to remark upon the absence of any positive evidence to show what the prisoner had really put into the bottle, and he said it appeared to him that an important answer had been made in the evidence for the prosecution, by no proof being offered that the castor oil in Mr. Budd's shop was pure, and did not contain prussic acid.

A number of respectable medical and other witnesses were called to speak to the prisoner's character, and they spoke very favourably of him, and stated that he was also remarkable for the care he took in making up the prescriptions he had to prepare.

Mr. Justice Wightman having summed up,

The jury retired for nearly an hour to consider their verdict, and they then came into court, and returned a verdict of not guilty, at the same time stating that they were desirous of expressing their strong reprobation of the careless manner in which poisons were generally dispensed.

The prisoner was ordered to be immediately discharged from custody.

INFLUENCE OF NEWLY BUILT HOUSES ON HEALTH.

Dr. Reidel, of Berlin, in a paper of great merit and interest, has recently directed attention to the injurious influence of newly built houses on the health and life of their occupiers. After mentioning the intimate connexion kept up between the external air and the human organisation, through the medium of the skin and lungs, he refers to experience to show the slow and dangerous diseases to which inhabitants of such houses are exposed, and considers it, therefore, to be the duty of the sanitary police to remove or check those evils by means of prohibitory measures. It is well known that the atmosphere is composed

of nitrogen, oxygen, and carbonic acid, in certain definite proportions, and that less or more of invisible vapour is always dissolved in it. Anything which tends to derange this normal composition must be injurious to the human system; and it is Dr. Reidel's object to show that newly built apartments are a fertile source of such derangement.

First. In new houses there is generally an increased proportion of water in the atmosphere which we breathe. This arises from the wooden materials, which may be too new and damp; from the stone work, which only becomes dry after long exposure, or from the materials used for cementing the stones and for colouring and varnishing the walls. The walls of those houses remain damp longest which have been plastered immediately after their completion, because the dried lime forms an external layer very difficult of penetration. As accidental causes which may render houses damp, it is necessary to mention wet weather when building, damp situations, large cellars, and enclosure by other high edifices, which prevent the free access of sun and wind.

Second. The proportion of carbonic acid is diminished by the mortar, which attracts it from the air; it may also be attracted by certain colours, such as those containing acetate of copper. No direct injury would, however, be caused by the diminution of carbonic acid, as it belongs to the matters given off by the lungs and skin.

Third. Certain deleterious ingredients, arising from the new materials, are mixed with the air. Thus particles of lime have been proved beyond doubt to exist in the atmosphere of new habitations, being suspended by the evaporation of the moisture; oils and metallic colours also less or more evaporate. Combinations of lead, copper and arsenic are employed in the preparation of painters' colours; and many of these volatilise, and may be taken into the system. Besides these, there are different chemical exhalations from new wood, mould, fungi, and grasses, which arise and putrefy in damp habitations. Attention has also been directed to the mould with which the furniture of newly built houses is covered, and to the constant moisture of the clothes and linen, from which circumstances alone influences injurious to the inhabitants may be expected; for, on account of the increased humidity of the surrounding atmosphere, not only is the skin prevented from free transpiration, but it is even induced to attract more moisture. This is also the case with the lungs; and thus the composition of the blood is rendered unnatural, as may be seen in the pale face, wasted muscles, and sluggishness of all the functions which ensue. In other cases, protracted rheumatism, inflammation of the joints, contractions or paralysis, are produced. In addition, the sojourn in a damp atmosphere is a frequent cause of the development of scrofula, intermittent and typhoid fevers, scurvy, quinsy, croup, &c. Wounds and ulcers more quickly assume an unhealthy appearance, and have a tendency to take on gangrenous inflammation. The evaporation from organic substances favours the production of miasmata and contagions, for in no situations did the cholera occur more frequently than in new, damp habitations. The inspiration of lime-particles may dispose to diseases of the chest, or apoplexy; and there can be no doubt that the lead employed in painting the walls, volatilising at a high temperature, may produce, in those who are constantly exposed to its injurious exhalations, symptoms of chronic poisoning, disturbed digestion, cholic, and paralysis. Chronic poisoning may also be produced by being exposed to the evaporation of Scheele's green, from which arsenious compounds escape for a long time after it has been put on the walls.

Lastly. The constant moisture of the clothes and beds, and the frequent effect on the food, cause certain injurious consequences on the constitutions of the inhabitants.

Since, then, the early occupation of newly built houses and recently plastered rooms causes so many diseases, and imparts to children the germs of prolonged sickness and misery, it becomes, argues Dr. Reidel, the duty of the state to prevent these evils by all possible means.

The following are the measures which he considers necessary:—1. Official examination of the materials before the commencement of the building, and the

enforcement of proper arrangements as regards the structure itself. Thus, in public contracts for any building to be erected in summer, the condition ought to be made, that the materials should be procured and dried during the preceding winter, and the term of completing any edifice should always be regulated according to the weather. Lead and arsenical colours for painting the walls should be entirely forbidden. 2. A house should not be inhabited before a fixed time after its completion had elapsed. Considering the different effects of situation, a house in town should remain uninhabited for a year, and in the country, where sun and air have free access, for half a year after it has been finished. Should any house be dried before the time appointed, the proprietor might request the sanitary commission to examine it, when, if sufficiently dry, it might be inhabited. 3. A commission should be appointed for the purpose of examining every newly built house, and testifying to its soundness before it is inhabited. Austria presents evidence of the feasibility of such an arrangement. 4. Instruction of the people as regards the injuries caused by inhabiting newly built houses, &c., and as regards the means to be taken for the purpose of counteracting these injuries.

In absence of such a commission, people ought at least to be informed of the diseases to which they are liable by exposure to such noxious evaporation; and if compelled by circumstances to submit, they ought to use the following precautions pointed out by Dr. Reidel:— Thorough drying and ventilation should not be confined to one room, but to all the adjoining rooms. Mould, fungi, &c., should be rubbed and washed off with the greatest care; fires should be frequently lighted, and the windows opened; and muriate of lime, or sulphuric acid, should be put in different places to attract the moisture. To purify the air from other injurious matters, chlorine, nitric acid vapours, fumes of sulphur, evaporation of vinegar, coarsely powdered and moistened charcoal put in different places, and other fumigations, should be resorted to. For rooms already inhabited, a solution of chloride of lime is the most proper substance. Drawers and other furniture should not be placed too near the damp walls; and if the latter should be covered with mould, they ought to be touched with a solution of chloride of lime. In addition, warm and dry clothes must be provided, and the bed must not stand too near the walls. Straw or feather beds should be changed frequently, or exposed to the sun.

Such is an abstract of Dr. Reidel's paper, which is replete with important, but too much neglected instruction. We trust, however, that the plain and convincing manner in which he has placed his views, will be the means of directing attention to an evil to which a large section of our population is continually exposed.—*Chambers.*

BODILY ACTION.

As the human mind is constituted for progress, and to find no rest in the past, but to be ever advancing to new perceptions, so its highest gratification consists in healthy action; and as the free use of our senses is essential to the full development of our intellect, so the intellect is never happily exercised but with some anticipated attainment in view. Consciousness itself is mind at work; and the sole delight of the spirit is in the exercise of power. Hence every idea associated with diminution of bodily activity is repugnant to our feelings. We fly from death to life, from inertia to energy, and set heaven in motion for our pleasure; for the soul was created to demonstrate the might of God in itself, by bringing matter under obedience to his will, thus annihilating resistance, and resting only in the accomplished works of Perfect Goodness, and the satisfaction of the Omnipotent; which, in fact, must be the sole end of all action, and all intelligence.

The muscular sense, or that which we exercise in using our limbs, is probably most requisite to earthly enjoyment; for, being deprived of this, instead of commanding, in the feeling of its own free might, the soul becomes consciously a prisoner and a slave. Will without power but aggravates the miseries of helplessness; and when we feel utterly incapable, every desire fails to disappoint, only because we cannot hope. It is this feeling of advantage in the possession of mus-

cular power which causes us naturally to dread decrepitude and to look upon the cripple with pity. Activity is also connected in our thoughts with our ideas of animated beauty, and therefore deficiency in any of the organs of our frame, by which action is affected, suggests unamiable associations, which perhaps are somewhat akin to those instincts so powerfully evinced among gregarious animals, and which urge them to drive the sickly and disfigured from the herd. This instinct is a merciful provision to prevent the propagation of deformity and feebleness. A degree of this instinct is proper to man; but, like his other instincts, it is to be reasonably directed. It will be useful to human society only when carried by men to the wise limit of avoiding the entailment of personal defects from parent to child. Where the ardour of natural love is not depraved by morbid sentiment, or by those sordid calculations which basely weigh affections with gold, the natural desire for healthy beauty and beautiful health will abundantly direct the personal interests of generations to come. The prevalent evil being thus diminished, reason will be well disposed to consider how best to ameliorate the condition of those who, by the unsearchable wisdom of the Creator, may still be permitted to enter life under the disadvantages of bodily curtailment. The existence of evil affords scope for greater good.

The Almighty has manifestly set some good in opposition to every evil, which good is destined so to triumph as that sin and suffering shall ultimately but exalt man's apprehension of Jehovah's unsearchable attributes. The possession of personal and physical advantage, however, does not always secure our immediate benefit, because the means of enjoyment will beguile us into folly as often as we seek pleasure at the sacrifice of principles; but while a perfectly formed body, rightly employed, will perhaps enable us to gain whatever of excellence this world can afford us; yet, those who are deprived of such facilities will still be enabled to attain a mental and moral superiority over all those who use the body merely as a means of luxurious indulgence, rather than of conquest over selfish propensities.

The influence of deformity of the body on the mind would afford an interesting and inspiring subject to an eloquent and ingenious thinker. Some infirmity of this nature has afflicted not a few of the notable characters of history. Nor is this surprising, since the circumstances in which individuals thus curtailed are placed, act as stimulants to the mental faculties. Thus, some, incapable it may be of locomotion, shrink away from the gaze of their more favoured fellow-beings, and having no resource but in thought, acquire such familiarity with the motives and operations of their own, and hence also of other minds, as to exhibit philosophy in its most amiable forms. They detect the cause of moral failure, and often present the meek and sublime example of moral and religious excellence, under the most abject of bodily disadvantages. Thus, in a family we frequently find the deformed or the disfigured making more than amends for deficiency in personal appearance, by superior intelligence and mental loveliness. Where we witness this, we ought to love and admire, for there we behold heroic beauty. The love of approbation frequently exhibits itself in a painful manner in those who labour under defects or distortions, and it is no unusual thing to observe the children, and even the men, whom nature has rendered comparatively unfit for any particular activity, endeavouring to show especial skill in that very respect in which they are least calculated to shine. This seems to arise from a desire to persuade themselves, as well as others, that they neither feel their deficiency so much, nor are really so deficient as may appear; and indeed it is the result of a benevolent law of our existence, by which the direction of the mind thus makes some amends for its want of full accommodation, and the disposition to do the best with defective means is certainly the very best method of improving the power which may be possessed. Hence it so frequently happens that the most unlikely persons are found the most efficient. The effects of Byron's club-foot on his character and conduct pointedly illustrate these remarks; for, from a boy, he was proud of his agility as a jumper, and took every opportunity of showing it,

while by these constant endeavours the evil was greatly diminished. The morbid regard for appearance which stimulated him to assume extravagant, because unnecessary, modes of setting off his manliness, may, perhaps, be traced to his foot, and it is even probable that the personal nature of his poetry, and the earnest portraiture of so many forms of beauty and heroism in his writings, may have proceeded from the constant and excessive consciousness of himself, which his personal defect seems to have produced. The loftiest education of the will is necessary to preserve an individual subject to congenital or accidental defect from moroseness of temper. This selfhood is interfered with in the most trying manner; hence fretfulness and discontent are natural consequences. If one so situated, meet not the consideration to which his position justly entitles him, conscious of the neglect of those whom he desires to love, he will, perhaps, lose his allegiance to society by seclusion in his own wretchedness; or, if he can, he will immure himself, like the "Black Dwarf," described by Sir W. Scott, a sensitive and suspected man, surrounding himself with granite barreness and solitude, as preferable to the cold hardness of human beings, though he still hoards in his heart the tenderest sympathies, and is ready, when circumstances shall demand it, to evince all the distorted energy of a mind matured by disappointment and solitary thoughtfulness into enormous vigour.

(To be continued.)

ANTISEPTIC REMEDIES.

It is ever important to have a basis principle to guide the human mind in its researches after truth, to enable it to select facts and associate them together on a common basis, that the structure of knowledge may be complete without contradiction and uncertainty, that truth in its simplicity and purity be preserved, and not, as it is now, mixed with error, thereby creating confusion and division in the practice of the science of medicine.

The cholera is a septic disease, and exhibits itself by the swift decomposition and putrefaction that its causes create in the human frame. It is supposed that its origin commenced at Jessore in 1817, but there is strong evidence of its having appeared in 1782. It increases in intensity in each succeeding visitation. From Jessore it spread with fearful rapidity over Asia, carrying off millions of inhabitants. In 1828 it broke out at Orenburg, and passing westward, raged with the most fatal consequences in different parts of Russia. In 1830 it appeared in Moscow, and in the Russian army in Poland. In 1831 it spread with rapidity over the greater part of Europe, carrying death in its course. It reached England in 1832 : the ravages it committed are no doubt well remembered.

We are informed that in Germany the attack of cholera was so sudden, and its fatal effects so rapid, that from an apparent state of perfect health, individuals ceased to exist, with but little warning, before assistance could be procured. During the prevalence of cholera, the atmosphere is in a septic condition, which is most pernicious to the human organism : indeed, in all epidemics the air and conditions are septic, and it is from the ignorance of this law that we behold so much neglect of sanitary measures and maltreatment of invalids.

It is a step towards the true knowledge of the evil, to discover that epidemics are not caprices of nature to be regarded as original marvels. It is a still greater blessing to have unfolded to us that they arise from a violation of fixed laws, which are in our power to observe, and however humiliating it may feel to the sensitive portion of the family of man to reflect upon, that his departure from those laws is the cause of the accumulated evils which surround him, yet he should be inspired with hope and satisfaction that it is within his province, as an instrument to be used as a co-worker with wisdom, to ameliorate the sufferings and to enlighten the minds of his fellow-creatures.

All good men in all nations will take part in propagating these sanitary doctrines of peace, health, and plenty ; their hearts beat towards God, and God will attend to them. Peace will further this great cause, for peace is a spiritual, sanitary measure. Conflict and division generate

disease by disturbing the spiritual principle of the body; the body sympathises therewith, decomposition and the septic law are set up, and disease follows, and sometimes death.

It is a very improvident thing to bury the dead within the district of cities. The Jews, who understood the antiseptic laws better than we do, prohibited the burial of the dead within three miles of the city. They observe the antiseptic laws which pertain to cleanliness—their laws of purification. They abstain from blood, eat pure food, which contributes to the health of man, and tends to develop in him a temperament of a finer quality. Blood, when taken into the stomach, decomposes and enters into a septic condition much sooner than purer food. Shell-fish, and any fish without scales, are not the purest food, and will often generate disease in the human constitution.

The primary source of some diseases is in the solids; of others in the blood and in the gastric juice; and some diseases arise from spiritual causes acting directly on the vital principle. All diseases do not arise from the derangement of the solids, or from the stomach, or gastric juice, or the blood; yet, in general, all these are more or less affected, from whatever source the disease may have first originated, as no one part of the human organism can be diseased without every other part more or less sympathising therewith.

We have schools of medicine, and professors of physic holding various doctrines: some say all diseases arise from a derangement of the spiritual principle; others say the nerves are the source of all disease, as they are of all sensation. Others assert that the blood is the foundation, and if you purify it, you will cure every disease in the human body; others say disease arises from corrupt humours; others that the solids are the source of general derangement. In all these theories there is some truth; but the professors thereof not possessing the foundation to build upon, they all stumble and contend one with another. They require enlightenment, that they may be all reconciled, not to their own respective truths alone, but each to the truths of their opponents; and nothing can set them right but a foundation principle which will recognise all the isolated truths which each theory possesses, and associate them together in one common group, that the practice of medicine may be healing to the sick, and the philosophy of physic saving to the world.

Nervous diseases are as curable, if rightly treated by attending to the antiseptic laws, as any known malady. Nervousness is a real disease, and arises from spiritual and physical causes, and can be cured by the enlightened physician:—Headache, pain in the side, pain in the back, and sometimes palpitation of the heart upon exertion; sleep disturbed, the temper irritable, spirits depressed, a sense of constriction across the forehead, sometimes a feeling of choking in the throat, loss of all interest in the affairs of life, a disinclination to go into society, the sight frequently impaired, specks appear before the eyes, giddiness, eructations, sinking at the pit of the stomach. In the morning the invalid is generally worse; eating dinner produces heat in the head, flushing of the face, a feeling as though the blood rushed to the head, blushing and burning in the face, &c.

The gastric juice of the human stomach possesses great antiseptic properties, and when the antiseptic properties are deranged by any cause, whether spiritual or material, it renders the human body less capable of resisting the effect of putrescent substances or deranged atmospherical influences. Persons whose antiseptic powers are weakened, are the subjects whom cholera and other epidemics attack first. The antiseptic properties of the stomach may be deranged in a two-fold manner; viz., by spiritual and physical causes; by spiritual causes, as grief, disappointment, anger, and the undue excitement of any of the organs of the brain; by physical causes, as by bad food, stimulating drinks, damp and unclean dwelling-places, and other septic conditions which act on the human constitution.

When the antiseptic condition of the stomach is deranged and weakened, and the septic law is set up, it is then that the individual is more subject to the contagious influence of the polluted and septic atmosphere upon his body, and he

falls a victim to cholera, diarrhœa, yellow, typhus, or other fevers, as they all emanate from similar causes.

The basis of any antiseptic treatment is the vital essence of all substances. Vegetable carbons of various plants of pure growth possess the power to conduct the vital essence to the human organism. The spiritual influence of primary essences has all to do with the health of the human body, and of all animal and vegetable life. When the vital forces are affected, the body becomes diseased. How oft does grief, fear, or disappointment produce a deranged state of the brain and gastric juice of the stomach! indigestion follows, and the septic law is set up in the vital forces of the body, and ill health is the inevitable consequence. Disease is the vital principle thrown out of its equilibrium, in its circulation, in the material organisation. Disease is discord; death struggling with life; the septic principle struggling with the antiseptic principle; the principle of decomposition struggling with that of recomposition. Where disease is, discord or derangement always exists in the vital forces, whether the direct cause be mental or material. To establish the original harmony in any diseased human body, the vital principle must be reached by the same mediums which it employs as instrumentalities in sustaining and building up the organism: this is accomplished by every kind of antiseptic means and conditions.

What is life? Many of the greatest authors who have written on physiology have endeavoured to answer this question, and to explain the nature and character of sudden death, but they have left the answer obscure and unsatisfactory. Some assert that the blood is the life of the organized being. Combe makes this assertion. Cuvier says, "that life consists in the faculty which certain organic bodies have of enduring for a time, and under a determined form, attracting unceasingly within themselves parts of the surrounding matter, and yielding up at the same time to the elements portions of their own substance." There are others who hold the doctrine that the nerves have a fluid circulating through them, and this fluid is the cause of life. The whole of these theories are based upon materialism, and are deficient, and therefore false in the conclusions made.

Life is an effect produced by the spirit, to form and sustain the living organisation acting upon the blood and other parts of the body electrically. It is electricity which causes the circulation of the blood and the action of the body; it is the spirit which acts upon the electricity, and the electricity upon the blood, &c.

The life is in the blood; but the blood is not the life of the living organism, but is only a secondary medium, electricity being the first or primary agent upon which the spirit acts, through which the spirit gives motion and power to the physical organisation.

Death, or sudden death, is the immediate severing or cutting off the communication between the spirit and the electricity; and when the separation is perfect and instantaneous, sudden death takes place; but if not perfect and complete, life lingers until the separation is accomplished.

Life sometimes continues in one part of the body, as the heart, etc., when it has departed from other parts, from the absence of suitable conditions in those parts to conduct the vital principle—electricity—the agent between spirit and matter.

A sudden fright, blow, or shock, is capable of separating the vital principle from the spirit and the body; life becomes extinct, and the body, which was once the organised temple and type of the living being, returns to its mother earth, decomposes, and passes into its primary elements, to form other substances and other organisations.

CLIFTON ROCKS.

AN ILLUSTRATION FOR MODERATE DRINKERS.

THE following extract is taken from a lecture recently delivered at the Guildhall, Bath, by the Rev. Newman Hall, L.L.B., of London, on the claims of the Temperance reformation on the Christian Church.

The illustration is pertinent and graphic, as those who are familiar with the locality of Clifton will at once perceive. We were much gratified to find, from a letter received the other day from an Independent minister in Herefordshire, who

happened at the time to be in Bath, and who went to hear the lecture in question, that he was so convinced of the soundness and rectitude of the principles then enunciated, as "to resolve to do away with the glass;" and, to continue his own words, "Mr. Hall delivered himself in so convincing a manner as could not but make all who had heads and hearts to do the same."

This minister has already commenced in good earnest with his own congregation, and we trust that an attentive perusal of the following passages and a prayerful consideration of the position and responsibility of the moderate drinker will induce many of our readers to adopt the same laudable resolve as our friend in Herefordshire.

"Some time ago I was on the beautiful down at Clifton, looking at the lovely scenery around, the river Avon winding so tranquilly below, and the Nightingale Valley, clothed with verdure, opposite. How perilous is the edge of those rocks, sloping gradually downwards! far more perilous than if it had terminated abruptly—I thought, standing there—I am only a few feet from the very edge, where the view is much more beautiful, but if I go on the slope, my feet may give way—I might slip down, and be unable to stop myself until I fell over the precipice. Now, supposing I had strong spike-nails put into my boots, and suppose I went across the slope and stood on the edge of the rock, and, digging my spikes into the ground, stood there secure; and suppose there was a crowd of persons passing by, and I knew nothing of them, they being strangers to me, and I was to exclaim in their hearing, 'How delightful this is! how much more enjoyable than standing back there away from the edge! Here I stand looking right over, with no danger of falling, and with a degree of excitement and delight that you who stand behind cannot imagine.' And suppose, attracted by my representations of the superior enjoyments of such a position, some of them behind venture, one by one, without having any spikes in their shoes, to try and stand where I stand, and to do just as I am doing; and suppose I see them slipping, and one falls and is dashed to pieces, while some continue to stand, having spikes, or others, feeling their danger, go back; but every now and then, one after another, an old man or a child, or a young man or a woman, falls over to be dashed to pieces; and suppose I still retain my position, and say, 'How delightful it is!' while men of benevolence exclaim, 'You wretch! you are guilty of the murder of these people?' and I say, 'I am doing nothing of the kind: what nonsense to charge me with it! for, though they are doing as I do, I am setting them the example to stand upon the cliff; I am not setting them the example to fall over.' What would you say to such a defence? Should I not be execrated from one end of the kingdom to the other, and rightly so? And was not this the position of the moderate drinker? If I am a man of moderation, I have certain spikes in my shoes—the spike of constitutional temperament, which does not urge me to excess, and which enables me to take from habit a small quantity and then stop; or the spike of conscience, or of true religion, which enables me to retain my position; but those who accompany me may be devoid of that peculiar constitutional temperament, or of true religion, or have but little conscience, and perhaps may have inherited a predisposition towards drunkenness. Yet I invite them to do as I do. See the result: 30,000 persons every year fall down those cliffs of drunkenness and are dashed to pieces; and yet moderate drinkers shall stand upon the edge, and say, 'We are not responsible for their fallings, because if they only did as we do, they would be safe.'"

EXERCISE FOR GIRLS.

Did any of my readers ever meet a girls' school taking their accustomed exercises? Is there not something excessively ludicrous in the idea of some thirty or forty girls walking primly and demurely to a certain point, then right about face and back again? The timid step, the regular, methodic movement, which I have heard waggishly compared to the mode of progress of an ordinary sixteen-legged caterpillar, the sedate tone of voice, each one talking with becoming decorum to the one with whom she walks abreast, perhaps catechising one another on the meaning of the eccentricities of some

French verb, or ascertaining the degree of proficiency each has attained in "Magnall's Questions"—how can this minister to health? But the medical attendant of the school recommends exercise; and is not walking across the common and back exercise? Of course it is! what more would you have? Why, if that very worthy lady, the schoolmistress, would allow me to have the charge of her pupils on the next afternoon's walk (I believe it is not orthodox to take a walk every day in the week), I think I could put them in the way of getting exercise by which they would be much more benefited, much more pleased, and come home with rosier cheeks and more eager appetites than is now the case. Probably at the schools where these girls are, there are several teachers, and perhaps some of the teachers may have some little knowledge of botany; so I would suggest that the teacher should ask two or three of the girls to bring her some wild flowers from their next afternoon's walk, with the promise held out that she would afterwards tell them something about them; and I must further petition that the girls be no longer compelled to walk two by two methodically, but be allowed to roam and ramble at large, of course taking care they did not get out of sight of their teachers. I admit that the effect of all the girls rambling along a country lane—some looking into the hedge bottom on this side, and others straggling to the other side of a broad green lane—would not have nearly the same fine effect which is produced by the formal procession along the dusty pathway on the common, but I think it would impress any one who saw them with the idea that the girls were at ease, and were out for enjoyment; whereas the stiff and prim set-out which we are accustomed to see, rather gives one the idea that they had said their lessons badly, and are doing penance for it, exposed to the public gaze.—*Stainton's Book for the Country in Summer Time.*

THE TISSUES OF THE HUMAN BODY.

When the analysis of the different kinds of animal matter that enter into the composition of the body has been carried to its ultimate point, it appears to be resolvable into two primitive forms: first, a substance capable of coagulation, but possessing no determinate figure; and secondly, a substance having a determinate figure and consisting of rounded particles. The coagulable substance is capable of existing by itself; the rounded particles are never found alone, but are invariably combined with coagulated or coagulable matter. Alone or combined with the rounded particles, the coagulable matter forms, when liquid, the fluids, when coagulated, the solids.

When solid, the coagulable substance is disposed in one of two forms, either in that of minute threads or fibres, or in that of minute plates or laminæ: hence every solid of the body is said to be either fibrous or laminated. The fibres or laminæ are variously interwoven and interlaced, so as to form a network or mesh; and the interspaces between the fibres or laminæ are commonly denominated areolæ or cells.

This concrete substance, fibrous or laminated, is variously modified either alone or in combination with the rounded particles. These different modifications and combinations constitute different kinds of organic substance. When so distinct as obviously to possess a peculiar structure and peculiar properties, each of these modifications is considered as a separate form of organised matter, and is called a PRIMARY TISSUE. Anatomists and physiologists have been at great pains to discriminate and classify these primary tissues; for it is found that when employed in the composition of the body, each preserves its peculiar structure and properties wherever placed, however combined, and to whatever purpose applied, undergoing only such modification as its local connexions and specific uses render indispensable. Considering every substance employed in the construction of the body, not very obviously alike, as a distinct form of organised matter, these primary tissues may be said to consist of five; namely, the membranous, the cartilaginous, the osseous, the muscular, and the nervous.

The first primary tissue is the peculiar substance termed MEMBRANE. It has been already stated that one of the ultimate forms of animal matter is a coagulable

substance, becoming concrete or solid under the process of coagulation. The commencement of organisation seems to be the arrangement of this concrete matter into straight, thready lines, at first so small as to be imperceptible to the naked eye. Vast numbers of these threads successively uniting, at length form a single thread of sufficient magnitude to be visible, but still smaller than the finest thread of the silk-worm. If the length of these threads be greater than their breadth, they are called fibres; if, on the contrary, their breadth exceed their length, they are termed plates or laminæ. By the approximation of these fibres or plates in every possible direction, and by their accumulation, combination, and condensation, is constituted the simplest form of organised substance, the primary tissue called membrane.

Membrane once formed is extensively employed in the composition of the body; it is, indeed, the material principally used in producing, covering, containing, protecting, and fixing every other component part of it. It forms the main bulk of the cartilaginous tissue; it receives into its cells the earthy matter on which depend the strength and hardness of the osseous tissue; it composes the canals or sheaths in which are deposited the delicate substance of the muscular, and the still more tender pulp of the nervous tissue; it gives an external covering to the entire body; it lines all its internal surfaces; it envelopes all internal organs; it enters largely as a component element into the substance of every organ of every kind; it almost wholly constitutes all the internal pouches and sacs, such as the stomach, the intestines, the bladder; and all tubes and vessels, such as arteries, veins, and lymphatics; it furnishes the common substance in which all the parts of the body are, as it were, packed; it fills up the interstices between them; it fixes them in their several situations; it connects them all together; in a word, it forms the basis upon which the other parts are superinduced, or, rather, the mould into which their particles are deposited; so that were it possible to remove every other kind of matter, and to leave this primary tissue unaltered in figure and undiminished in bulk, the general form and outline of the body, as well as the form and outline of all its individual parts, would remain unchanged. —The properties which belong to membrane are cohesion, flexibility, extensibility, and elasticity. By its property of cohesion, the several parts of the body are held together; by its combined properties of cohesion, flexibility, and extensibility, the body in general is rendered strong, light, and yielding, while particular parts of it are made capable of free motion. But elasticity, that property by which parts removed from their situation in the necessary actions of life are restored to their natural position, may be regarded as its specific property. The varied purposes accomplished in the economy by the property of elasticity will be apparent as we advance in our subject. Meantime, it will suffice to observe that it is indispensable to the action of the artery in the function of the circulation; to the action of the thorax in the function of respiration; to the action of the joints in the function of locomotion: in a word, to the working of the entire mechanism by which motion of every kind and degree is effected. All these properties are physical, not vital; vital properties do belong even to this primary form of animal matter; but they are comparatively obscure. In the tissue with which organisation commences, and which is the least removed from an inorganic substance, the properties that are prominent and essential are merely physical.

(To be continued.)

NOTICES.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

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COFFIN'S
BOTANICAL JOURNAL
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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE TOBACCO QUESTION.

We have, on many former occasions, invited the attention of our readers to the habit of smoking, which is greatly increasing in this country. We have boldly pointed out its injurious tendencies. Our objections to the use of the noxious weed have been founded on our knowledge of the inherent properties of tobacco and of the delicate organisation of the human constitution. Independently of the evils which most frequently manifest themselves in those who indulge in the use of the pernicious narcotic, miseries are entailed on their infant offspring, which are irreparably damaged. They come into the world with a deficiency of vital energy. Existence in them is a struggle from the beginning, and many of them sink in the conflict of dentition, and those who survive this trying period seldom acquire a robust constitution and a vigorous, healthy development: they are a pale, puny race, nervous, fretful and peevish, having no enjoyment of life for themselves, and making all around them unhappy. We need not repeat the pathological causes which are called into action to produce these lamentable results to which we have referred. Men whose opinions on some subjects are antagonistic to ours have abundantly corroborated the sentiments which we have again and again published; we have, therefore, collected the papers which have been recently given to the public, rejoicing in the amount of interest which has been awakened in the question. We hope that the young may be induced to avoid forming those habits of either chewing or smoking tobacco which cannot fail to blanch the cheek, deprive the whole skin of its healthy hue, retard the growth of the body, dry up the vital power, gloom the intellectual energies, and bring on a premature decrepitude.

We cordially invite our readers to carefully consider the very weighty truths contained in the following paragraphs:—

(Letter from Mr. Solly, F.R.S.)

To the Editor of The Lancet.

Sir,—I am glad to find that a passage in one of my lectures on paralysis, which has appeared in *The Lancet*, alluding to the injurious effects of tobacco, has induced some of my professional brethren to communicate their views and experience on this important subject. I am quite sure that there are hundreds of medical men who must have observed, though silently, the baneful effects of this noxious weed, and if I can, in any measure, induce those who have time, really to collect facts, and give the result of their experience, I shall materially assist the onward march of truth. Time, careful and truthful observation, can alone finally demonstrate the correctness or shallowness of the opinions I have advanced, and I hope that all who desire to add their mite to the evidence for or against this question, will not be ashamed to give their real names, and avoid the imputation of not belonging to a liberal profession, which in all scientific matters seeks the truth and not victory. I will not suppose, as some have suggested, that the anonymous writer is either a past or present dealer in tobacco, but, rather, that feeling ashamed of what he had writ-

ten, he thought it more prudent to avoid exposing himself. For above ten years I smoked occasionally, and I am well acquainted with all the soothing, calming, and for the time, agreeable effect of a cigar, or even a short pipe. I left it entirely off about nine years since. This I did because I believe that it impaired my nervous energy, and I have every reason to be satisfied with the change. Since that time my attention has been uninterruptedly directed to the question—Is tobacco-smoking positively injurious? The conclusion, therefore, which I have briefly given to the world through your pages, has not been hastily or capriciously formed on a few isolated facts. For the last twenty years I have been the medical examiner of various insurance offices—the Royal Exchange, the Victoria, the Crown, and New Equitable. The two former I still hold. In my examinations I inquire whether the examinees are in the habit of smoking, and I can now generally tell by the countenance whether they are, or not, habitual smokers. If I have any doubt on this point, an examination of the fauces decides it. The fauces of the smoker are always more or less injected and rough, presenting the appearance of a piece of dirty red velvet, instead of the pale, pinkish, lilac hue of a healthy throat. The tongue, when smoking is not combined with drinking spirits, as is seldom the case in the upper and middle classes, is usually furred and white, but not otherwise unhealthy. This condition of the fauces may be produced and always accompanies, the intemperate use of intoxicating liquors; but then the tongue is unnaturally red, the papillæ at the tip and gustatory papillæ prominent and angry. The condition of the fauces is well worthy the attention of the profession; let them notice it, if possible, in almost every patient that comes before them, and they will soon be struck with the correct index these parts afford of the habits of their possessors. There is one source of fallacy which must, however, be guarded against. This is a temporary vascular injection induced by the long-continued straining of some people when requested to take a deep breath for the purpose of showing the fauces. Where, however, the examiner is aware of this fact, he will find no difficulty in distinguishing the temporary blush from the permanent stain. I may here add, by the by, that I have occasionally detected habits of intemperance, which the statement of the examinee, and the letters of his referees, gave no note of. In truth there are many men who habitually drink more than is consistent with longevity, but who never get drunk. Such men invariably declare that they are quite temperate. This condition of the tongue and fauces is not limited to the mouth; it is not a mere local congestion, it exists more or less in the stomach and the rest of the alimentary canal; and hence, I believe, in the otherwise healthy subject, a cigar acts as a moderate purgative, but in typhus as a poison. Can, however, any medical man assert that it is natural or healthy to take an aperient daily? In the habitual smoker the heart is irritable, and the person nervous, the pulse frequently intermittent and irregular in force and frequency.

In the course of my practice, I have met with many individuals who, like myself, have abandoned smoking because they thought it did not agree with them; many have done so at my suggestion. I have never found one who does not assert most positively that he has been in better health since, and that his intellectual activity has been increased.

Lord Raglan smoked occasionally in early life, and previous to his taking the command of the army of the East, but after that time, and during the whole of his sojourn in the Crimea, he never smoked at all. Is not this a tacit acknowledgment that smoking interferes more or less with that high intellectual activity which is required in high positions?

I may be told that a certain exalted personage, whose kindness of disposition is only equalled by his moral and physical courage in the discharge of all his duties, smokes habitually without detriment. I can only say, God grant that it may not shorten his valuable life and impair his nervous system!

With regard to the arguments that have been adduced in favour of its innocence, I will first advert to the Turks. The mental condition of the Turks as a nation would be one of the strongest arguments on my side, were the question not compli-

cated with opium. The fact of their longevity as a race must be proved by statistics, to establish the opinion that smoking does not shorten their lives ; but even then it would not prove that smoking is innocuous to Englishmen. My assertion that it is especially injurious in England applies to the young men of this country, about whom I am most anxious, because they all live up to fever point. I believe that the injury inflicted by a pipe of tobacco in the mouth of a poor man who lives below par, rather than above it, cannot be appreciated ; but not so a cigar smoked by a man who lives high, and uses his brain much. It matters little whether the mere animal, let him be in the shape of a stock-broker's clerk or a country voluptuary, smokes more or less, but I am sure it is incompatible with great and long-continued intellectual activity and that amount of high living which appears almost necessary to health in the imperfect atmosphere of great towns.

The different mode of living on the Continent and here renders all arguments drawn from the effect of smoking on foreigners in favour of the habit scarcely applicable to the inhabitants of this island, though even in Holland, according to the statement of that interesting writer, Dr. Carlyon, this habit is fatal. The whole passage should be read, but I must limit myself.

"And yet what can be more deleterious than tobacco? Many an honest Deutscher have I seen smoking himself into the grave! Rauch—Rauch—immer Rauch! The countenance pale and haggard, the frame emaciated, the propensity to smoke irresistible !"

I wish that our cousins in America would tell us whether there is no difference in the appearance of the habitual smoker and the man who abstains altogether. I am delighted to learn from Mr. Neil that the habit there has diminished; if so, it is a strong argument against it. The abandonment of it must be the result of experience of its injurious effect, for, once begun, it is too fascinating, too comforting ever to be relinquished, except from a forced conviction of its fatal tendency. It is this fascination in the practice which makes me so anxious to prevent all young men from ever commencing it. I am told that if a man smokes in the streets of Boston, U.S., that he subjects himself to a fine.

I do not think that the argument made use of by one of your correspondents, that smoking and longevity have advanced *pari passu* in this country, goes for anything, inasmuch as the great increase in the habit of smoking has only taken place in the last ten or fifteen years, so we have yet to learn its real effect on the community. I hope that our talented Registrar-General will be able in time to give us some statistics on the subject, and also that our psychologists and mental physicians will give us some account of the average number of lunatics who have been habitual smokers. I have no doubt that Dr. Forbes Winslow will give us some information through the pages of his excellent journal.

Lord Shaftesbury paid a just tribute to our profession when he said, in reference to sanitary matters, that the profession worked at them with such energy and truthfulness, it might be supposed that, instead of living by the *diseases* of mankind, their income was drawn from them, as in China, only when in health. God forbid that we should ever lose this character in England, or that any of us should advocate indulgence in tobacco because we have not perceived its injurious effects on our own persons, or because the habit has become to us a necessary of life! It appears to me that it is our *duty* to discourage any habit that is not conducive to health, and equally *criminal* to encourage a habit which is liable to become a master and a tyrant.

The gentry and aristocracy of this country must not suppose that because the habit of smoking does not lead in their case to drinking, that therefore it injures them not. Hundreds of gentlemen smoke without drinking more than they believe is conducive to health, and smoking does not in their persons lead to intemperance. But from this fact the habit is the more dangerously insidious. Its ill effects are less easily observed; the habit advances in intensity without their perceiving any objection to it; but the penalty is paid nevertheless, and an untimely grave is often the result.

One of the best riders to hounds in

England, who never smokes, told me that he required much less sleep than his friends, almost all of whom smoke, and that they often remarked with astonishment how fresh he always was in the morning, notwithstanding late hours, champagne, &c. It has been asserted that smoking in India is essential to health; but I have met with many old Indian officers who strongly object to it in that country as leading to drinking; some who have abandoned it while out there, because they found the habit disagree with them, and they invariably declare that their health had been improved by the change. That gallant soldier, General Markham, whose life was sacrificed to his hasty journey from India, never smoked himself, nor would he allow any of his personal staff to do so, so strong was his opinion of its injurious tendency to the soldier's character.

I may be mistaken, but I believe that all our greatest men, I mean intellectually, statesmen, lawyers, warriors, physicians, and surgeons, have either not been smokers, or, if smokers, that they have died prematurely.

I have mentioned the fact regarding Lord Raglan, I may add to it that both Admirals Dundas and Napier gave up smoking as soon as they entered on their respective commands. My friend, Mr. Whitfield, the resident medical officer at St. Thomas's Hospital, speaks most strongly of the injury he has witnessed from habitual smoking, his experience extending over above forty years, in a hospital containing near 500 beds, and relieving some thousands of out-patients every year. He has seen three cases of delirium tremens induced by tobacco-smoke alone. In none of these cases had the patients indulged in drinking intoxicating liquors, so that there was no doubt of the single cause of the disease.

I cannot conclude this lengthy but imperfect epistle without thanking my professional brethren for their important communications on this subject in your pages, and acknowledging the valuable observations on it by Mr. Lizars, whose admirable pamphlet should be read by all smokers and young men thinking of it. The observations of Mr. Higginbottom, of Nottingham, are excellent, and there is also a good article in one of the numbers of the *Medico-Chirurgical Review*, many years back, deserving of attention.

No one will dispute that *The Lancet* has done much to relieve suffering humanity, but never, in my opinion, has either the surgical instrument or the periodical done so much good as the present devotion of its pages to this important question, upon which the happiness or misery of thousands depends. So strongly do I feel its importance, that I believe, if the habit of smoking in England advances as it has done during the last ten or twelve years, that the English character will lose that combination of energy and solidity which has hitherto distinguished it, and that England will sink in the scale of nations.—I remain, Sir, yours, &c.,

SAMUEL SOLLY.

St. Helen's-place, January 30, 1857.

To the Editor of THE LANCET.

Sir,—The more I think of the tobacco question the more it haunts me. I feel that I cannot do justice to its importance, but I am anxious to add something to my last communication. Every day the subject is forced upon my mind. I scarcely meet a friend or patient who does not bear his testimony to the mischief of which he has been the witness, in his own case or that of some friend, from tobacco.

The profession have no idea of the ignorance of the public regarding the nature of tobacco. Even intelligent, well-educated men stare in astonishment when you tell them that tobacco is one of the most powerful poisons we possess. Now is this right? Has the medical profession done its duty? Ought we not, as a body, to have told the public, that of all our poisons it is the most insidious, uncertain, and in full doses, the most deadly. Why should they not know at once how often it has proved fatal in the human subject, when injected into the rectum in strangulated hernia. I heard, only the other day, that a celebrated surgeon,—rather an obstinate one,—since dead, lost five cases in succession, from the effects of tobacco injected into the bowels.

It seems almost trifling with the subject, and yet the extreme ignorance which

prevails regarding this frightful pest, rendering even trifles weighty in the scale, induces me to remind all smokers, and those of our brethren who madly encourage it, that the first effect of a cigar on any one demonstrates that tobacco can poison by its smoke, and through the lungs, just as certainly as through the bowels.

It is true that the all-perfect laws of Nature point out to careless man that he is taking in a poison, and by the sickness, headache, and vomiting which follow, stop for the time the poisonous dose and avert the fatal end.

Professor Johnstone, of Durham, in his "Chemistry of Common Life," has pointed out very simply the deleterious effects of tobacco by separating its essence from the vegetable fibre. The alkali thus extracted is scarcely inferior in its narcotic and poisonous effects to prussic acid: a single drop is sufficient to kill a dog. If evaporated in a small room, the vapour is so irritating that it is difficult to breathe it. "A hundred pounds of dry tobacco-leaf yield about seven pounds of this alkali, called nicotine. In smoking a hundred grains of tobacco, therefore—say a quarter of an ounce—there may be drawn into the mouth *two grains or more of one of the most subtile of all known poisons.*" Another of the essences is its empyreumatic oil; one drop applied to the tongue of a cat will bring on convulsions, and two drops cause instant death. Under its influence serpents die as instantaneously as if killed by an electric skock. To the public these facts are perfectly unintelligible. They do not appreciate them if they hear them. If they read of them they think there must be some mistake. And why? Because they are not physiologists, and are therefore ignorant of that beautiful law by which the system is gradually brought to tolerate a poison which at its first advent would be intolerable.

The poisons of typhus and opium afford illustrations of this law. Many a poor family in this country lives on without apparent injury in a house reeking with the poison of typhus fever. Their constitutions appeared to be inured to the evil. But if a fresh family came into that house from a healthy locality, most certainly would it be attacked by that disease. Not that the family thus described as hardened to the disease are in perfect health. The poison, though not directly fatal, indirectly undermines the health, and reduces the constitution of its victims to half their natural entity. Look at the pale face, imperfect in its development, and deficient muscular power of the inhabitants of unhealthy, malarious districts. They live on; but with only half the proper attributes of life. So it is with the habitual smoker; his system is accustomed to the poison; and so the habitual opium-eater can take an ounce of laudanum for his morning's dram and feel it not, when the eighth part of it would be fatal to the uninitiated.

What a blessing it would have been to mankind if all men had shrunk from this plague of the brain, as did the first Napoleon! One inhalation was enough; in disgust he exclaimed, "Oh, the swine! my stomach turns; it is a habit only fit to amuse sluggards."

It is not, however, to be denied that when the first poisonous effect has passed off, and the system begins to tolerate it, that tobacco acts as a slight stimulant to many organs. First to the brain, like wine and spirits in small quantities, or inflammation in its very earliest and very transitory stage, it excites to an unnatural degree the natural function of the part. I once knew a young clergyman who could only write his sermons under the stimulus of tobacco, and there is no question that these discourses were brilliant, eloquent, and most interesting to listen to; but the end of that man is not yet come.

In the same way tobacco is a stimulus to the generative system, but the stimulating effect is much earlier followed by its depressing action; consequently it has been long known, when used immoderately, to extinguish the sexual appetite and annihilate the reproductive faculty. It is a prolific source of spermatorrhœa. During one week lately I was consulted by three young men, suffering from seminal weakness, in all of whom I could trace this drain to the relaxing, enervating effect of smoking. Happy would it be for them if the abandonment of the vice would at once restore them to health; but no! the evil remains, though the cause

be removed. I do not mean remains permanently, because all such cases are ultimately, though sometimes slowly, curable. These three cases are merely a few out of many I have seen of late years.

I have been asked to produce *facts* in proof of the deleterious effects of tobacco, and facts in abundance shall be forthcoming when I have had a record kept of its effects in my hospital cases; but the facts which I have now by me, being private cases, contain details the relation of which would involve a breach of confidence which nothing would justify. No man likes to be held up as a victim of tobacco-smoke, though I could name many whose health has been decidedly injured by it. I have seen many cases of amaurosis, both in the incipient and advanced stage, caused by smoking. An old dresser of mine at the hospital, of the name of Bain, who was an amiable, attentive pupil, but never very efficient, smoked, I have since heard, a good deal when at the hospital, but after he left he was smoking nearly all day long. His debility was now so great, that he was obliged to have a glass of bitter beer in the morning before he could rise. He was not addicted to drinking, and in that sense not at all intemperate. The whole of his ailments were produced by tobacco-smoke. He could not attend to his profession, gave up his practice, and was sent to Brighton for change of air. Improving slowly there, he was at last sent out to New Zealand; and if he has left tobacco behind him, he will land a new man; if not, his fate is sealed.

I know a valued servant, in a family where I attend, whose memory was failing him, his face getting yellow, and his hand shaking, so that those who did not know him attributed his condition to drinking. He abandoned smoking, and in two years was an altered man.

Few fathers have any idea, if they do not smoke themselves, of the expense their sons plunge into when they commence smoking. £30 per annum is about the lowest sum spent by a man who smokes cigars. I know many who have spent £120 and one £300 a year, on tobacco alone. Merely looking upon it in a sanitary point of view, how much better would it be if this money were spent in horse exercise, steamboat or railway excursions, when the money can legitimately be devoted to pleasure! But how many a lad spends such money when his father can little spare it out of his hard-earned income!

There is a moral view of this smoking question which, I think, has not been sufficiently considered, but which it behooves the medical man to ponder upon as seriously as on the impropriety of giving opium in slight cases, lest he engender the habit, and a yearning for the drug after the disease for which it was administered has subsided. I say "the medical man," because I do think that the profession have much to blame themselves for in having allowed this frightful pestilence to advance so far into the bowels of the land without raising their voice against it.

The advocates of smoking plead for it because it soothes them when they are troubled in mind, angry, irritable, and petulant in their families; thus meeting a moral evil with a physical remedy. Would it not be far more manly, far nobler, far more in accordance with the precepts of Christianity, if, instead of smoking away our griefs, and stifling in the pipe our angry passions, we met our difficulties with a manly front, and conquered our evil tempers by the force of our better nature? Are not all troubles sent by an all-wise Providence to improve the character, and, by self-control, raise the soul above the influence of the carnal nature? Do we not pervert the streams which are intended to purify us by taking the opiate draught of smoke, instead of submitting to the rod, and rising strengthened by the chastisement?

In conclusion, I must quote from the writings of that excellent practical surgeon, Ranald Martin, whose Eastern experiences render his opinion of immense value.* "But there is another habit respecting which I shall venture to say a few words, because it is both a bad one, and a comparatively new one. I mean the immoderate use of tobacco—a habit brought amongst us from the continent of Europe, on the cessation of the French war. Young military men are apt to regard the habit as a manly one, until severe

* The Influence of Tropical Climates on European Constitutions.

dyspepsia, shattered nerves, sallow complexion, disturbed action of the heart, and other symptoms show themselves, and then it is frequently too late to stop." "Of hookah-smoking I need say nothing, as happily its day is nearly gone; but I have seen many cases of severe constitutional and cardiac disturbances from its abuse, with perfect recovery of health on the discontinuance of the habit, the digestive functions and those of the heart and nerves being seriously affected in the most moderate smokers. Of the miseries, mental and bodily, which I have witnessed in the persons of young officers from the abuse of cigars, I will only say that they very far exceed those detailed in the 'Confessions of an Opium-eater.' Were I to relate but a small portion of the results of my personal observation as to the effect of the abuse of tobacco, I might be suspected of exaggeration."

I have already referred to the valuable pamphlet of Professor Lizars, but I must make one quotation from it:—"Mania is a fearful result of the excessive use of tobacco, two cases of which I have witnessed since the publication of this treatise." He then goes on to state, that two brothers in one family had become deranged from smoking tobacco, and in that state committed suicide. There was no hereditary predisposition to mania in the family.

I had forgotten till reminded by Lizars, how powerfully Dr. Webster's facts, brought forward in his paper at the Royal Medical and Chirurgical Society on the 2nd of May, 1854, support my assertion of its influence on the brain. He distinctly enumerates tobacco as one of the causes of insanity, and supports his opinion by reference to the statistics of insanity in Germany. Does not this show that I am right in trembling for the effect which may ultimately be produced on the national character. We must not forget that insanity once generated in a family does not always stop in the person of the poor deluded victim who educed it in his own body by self-indulgence. His offspring are not unfrequently sufferers; and most truly has Sacred Writ declared that the sins of the father *are* visited upon the children to the third and fourth generation.—I remain, Sir, yours, &c., S. Solly.

(To be continued.)

BODILY ACTION.

(Concluded from page 271.)

Many are the examples which history presents of the victims of deformity, struggling against personal insignificance, and rising above the prejudices of their times, till the public have felt that the mind is the man. The soul is not cribbed in the lowly chamber, because the body allows it not a place in courts or camps. Æsop, though a deformed slave, gained a proverbial mastery over their minds, and taught the very brutes to speak that reproving wisdom which men prefer in disguise, since they would rather learn from fables than from facts. A partial arrest of bodily development seems rather to favour that of the mind, provided the brain be not defective. This may be accounted for by supposing the existence of a fund of nervous energy, not demanded by the body, and to be used by the mind. Thinking is generally conducted at some expense to the nutrient powers and nervous enegy, and, therefore, perfect quiescence of body is necessary to profound thought. Of course, where nature enforces physical rest, and still confers abundance of brain and intellect, there thinking may be continued with the least fatigue.

Our moral lesson, from this part of our subject, is the propriety of making the most of our opportunities for mental advance and improvement, since we see that those who have been stimulated by a feeling of necessity to keep watch over their own thoughts, have gained advantage even from impediment. We are accountable in proportion to our facilities, and are inexcusable if we suffer the body to conquer us by those very endowments which are intended to secure the victory to our souls. Inaction and exhaustion are equally to be dreaded, since both engender irritability, and alike disqualify the mind for proper attention to surrounding objects, by causing it to dwell upon the discomforts of self; but there are many other thoughts arising from this subject, a few of which may profitably detain our attention. Action expresses character. Every passion possesses the muscular system with a power peculiar to itself: hence it is expressed in the

features and in the attitude. By some mysterious law of sympathy, association, or suggestion, it happens, that if the soul merely imitates in action the appearance presented by any passion, the nerves which are called into operation for that purpose become so excited that they, in return, are apt to fix the mind for a time in that direction, and the will is thus often mastered by the state of its own instruments, though that state be produced by voluntary exercise, and he who began by enjoying the mimicry of passion, at length feels the reality of its power. Hence it happens that pugilists and gladiators, in the fulness of their bodily energy, find it extremely difficult to keep their tempers during their preparatory sham-fights, and, therefore, systematic trainers recommend their lusty pupils to go regularly to church, not for the sake of religion, but to quiet their nerves by a sort of physical sympathy with peaceful and devout persons; for it is found, that to be in the midst of a worshipping assembly, has a tranquillising influence, even on the tempers of those who know nothing about godly motives. This fact shows the brutalising effect of calling the organs of defence and destructiveness into such violent action. Two dogs at play exemplify the subject; they gambol around each other in quite a merriment of defiance; they snarl, they bark, they bite, with an amiable restraint on their canine teeth and propensities, until, in the excitement of his nerves, the more sanguine dog nips his friend's ear a little too sharply, and instantly their mutual forbearance is at an end, and their play-fight ends by their fighting in earnest; so the "dogs that delight to bark and bite" teach us a lesson that Dr. Watts has forgotten to mention. It is better not to allow our fighting qualities to be called into play lest, like controversialists and prize-fighters, we should endanger our safety by losing our tempers. The only justifiable cause of war is a love of peace. Christianity converts our organs of destructiveness into instruments of benevolence, our swords into ploughshares, our spears into pruninghooks.

The influence of the body on the mind is well shown by the very same evidence that proves the superior influence of the mind on the body. The soul calls the nerves into action; the medium of mental manifestation is stimulated by the will to such a degree that at last the will is overpowered by its own effects. It is said that Campanelly, the physiognomist, was as remarkable for his power of imitating the expression of another's features as in reading their characters; in fact, it appears that his sagacity in detecting the peculiar dispositions of others arose from the facility with which he mimicked their gestures and the play of their features. By thus composing his body as much as possible to their likeness, he found certain states of mind excited by which he was enabled to detect the thoughts and dispositions of those whom he imitated. On this fact Burke remarks, that he had himself observed his mind involuntarily turned to those passions whose appearance he had endeavoured to represent in his own person. It is indeed hard to separate the passion from its correspondent gestures, for the consent of the will to the appropriate action is the embodiment of the passion itself, and a realisation in feeling of that which otherwise exists but in idea.

To imitate evil is to be evil, and so it is also with approval or pleasure to witness it; for the sight of passions personally represented excites a corresponding sympathy in beholders, and therefore philosophy agrees with religion in regarding it as unreasonable to encourage mere stage-players; dramatic extravagance, however, is sure to be popular, until the public mind becomes accustomed to contemplate the more instructive and impressive scenes of actual life and the wonders of creation. True history is the best drama, and the fulfilment of duty is the most impressive.

If, then, we would train the intellect to good purpose, we must choose wise associations, and, above all things, remember that wisdom, as Solomon says, is the principal thing; by which I understand him to signify that the education of the affections is the beginning, middle and end of right discipline, since ideas recur with controlling force in our reasoning, just in proportion to the power and the peculiarity of the passion with which the ideas were first impressed on our minds. Those thoughts which are connected with per-

sonal affection will outlive all other thoughts, or, at least, will be pre-eminent in their influence on our conduct, and that because it is a law of our bodily existence that no personal feeling can be experienced, either directly or smypathetically by us, without producing a tendency to action. Affection—personal feeling—governs the will itself, and therefore regulates all the associations, both of the body and the mind. Even God himself exerts no influence upon our morals, but as He is revealed to us in personal relationship. Our ideas of an undefined might are merely nebulous creations, and can never render us rationally devout, and we might as well adore a thunder-cloud as a God without a personal correspondence with ourselves. It is this indefiniteness of notion connected with the Word of God which causes many to find, what they call devotion, such a heavy servitude; they, for a time, resign their understandings to a mysterious apprehension which leads neither to love nor knowledge, and therefore it is no wonder that such persons resort to their devotions as little as possible, and that just for decency's sake: true worship, however, is not hard work, but, indeed, an unutterable delight, because in it the enlightened spirit of man recognises a true object of affection as well as of adoration, a personal Deity, who, while enforcing the ordinances of the boundless universe by His presence, still makes known his will in life, power and love, as the immediate friend and patron of each believing man.

AN ALLOPATH A VICTIM TO HIS POISONOUS DRUG.

The assistant at a druggist's shop in Brompton, who recently supplied a dose of castor oil which, by the accidental admixture of a poisonous quantity of prussic acid, caused the death of the man who took it, was last week tried for manslaughter and acquitted. The jury expressed their strong reprobation of the careless manner in which poisons were dispensed. As far as this individual case is concerned, it will undoubtedly prove a lesson that will last the assistant for the rest of his life. The law has judged him, and taken a very merciful view of the case. We protest, however, against such an absurd straining of the truth as was evinced by the counsel for the defence. We append an extract from his speech that suggests a variety of adulteration which our "Commissioners" never dreamt of in their philosophy:—"It appeared to him that nothing was more probable than that the prussic acid which had caused the death of the deceased had got into the castor oil by accident. It appeared to him that a most important omission had been made in the evidence for the prosecution, by no proof being offered that the castor oil in Mr. Budd's shop was pure, and did not contain prussic acid." The learned counsel must, assuredly, have a most eccentric theory of probabilities if he believed all this.

A similar case of accidental poisoning by prussic acid, which recently occurred in Baltimore, afforded a very tragical illustration of retributive justice. *The druggist was so positive the medicine* (which had previously poisoned a child) *was properly prepared, that he swallowed a portion of it himself.* The drug was quick, and in five minutes he was dead. On analysis it appeared that he had mixed a preparation of hydrocyanic acid sufficient to poison fifty men.

THE TISSUES OF THE HUMAN BODY.

(*Continued from page* 276.)

By chemical analysis, membrane is found to contain but a small proportion of azote, the peculiar element of animal matter. Its proximate principles are gelatin, albumen, and mucus. In infancy and youth, gelatin is the most abundant ingredient; at a more advanced period, albumen predominates. Gelatin differs from albumen in containing a less proportion of azote and a greater proportion of oxygen; on both accounts it must be regarded as less animalised. Thus animalisation bears a certain relation to organisation. The simplest animal tissue is the least animalised, and the least of all at the earliest period of life. Not only are the physical and mental powers less developed in the young than in the adult, but the very chemical composition of the primary tissue of which the body is constructed is less characteristic of the perfect animal.

Membrane exists under several distinct

forms; a knowledge of the peculiarities of which will materially assist us in understanding the composition of the body. The simplest form of membrane, and that which is conceived to constitute the original structure from which all the others are produced, is termed the *cellular*. When in thin slices *cellular membrane* appears as a semitransparent and colourless substance; when examined in thicker masses, it is of a whitish or grayish colour. It consists of minute threads, which cross each other in every possible direction, leaving spaces between them, and thus forming a mesh or network not unlike the spider's web. The term cells, given to these interspaces, is employed rather in a figurative sense than as the expression of the fact; for there are no such distinct partitions as the term cell implies. The best conception that can be formed of the arrangement of the component parts of this structure is, to suppose a substance consisting of an infinite number of slender, thready lines crossing each other in every possible direction. The interspaces between these lines during life, and in the state of health, are filled with a thin exhalation of an aqueous nature, a vapour rather than a fluid, rendering and keeping the tissue always moist. This vapour consists of the thinner part of the blood, poured into these interstitial spaces by a process termed secretion. When occupying those spaces, it makes no long abode within them, but is speedily removed by the process of absorption. In health, these two operations exactly equal each other; but if any cause arise to disturb the equilibrium, the vapour accumulates, condenses and forms an aqueous fluid, which distends the cells and gravitates to the most depending parts. Slightly organised as this tissue is, and indistinct as its vital functions may be, it is obvious that it must be the seat of at least two vital functions, secretion and absorption.

It is certain that the interspaces or cells of this membrane have no determinate form or size, that they communicate freely with each other, and that this communication extends over the whole body; for, if a limb which has been infiltrated be frozen, a thousand small icicles will be formed, assuming the shape of the containing cells, some of which are found to be circular and others cylindrical, and so on. If air or water escape into any particular part of the body, it is often effused over the whole extent of it, and butchers are observed to inflate animals by making a puncture in some part where the cellular tissue is loose, and from this one aperture the air is forced to the most distant parts of the body.

Cellular membrane, variously modified and disposed, forms the main bulk of all the other solid parts of the body, constituting their common envelope and bond of union, and filling up all their interstices. It is dense or loose, coarse or fine, according to its situation and office. Wherever it is subject to pressure, it is dense and firm, as in the palm of the hand and the sole of the foot; around the internal organs it is more loose and delicate, and it becomes finer and finer as it divides and subdivides, in order to envelop the soft and tender structures of the body.

According to some who have carefully examined with the microscope its component threads, they consist of minute particles of a globular figure: other microscopical observers regard the cellular threads as coagulated or condensed animal substance, perfectly amorphous (without form).

Every part of this tissue is penetrated by arteries, veins, absorbents, and nerves, endowing it with properties truly vital, though in a less degree than any of the other primary tissues; and varied and important as the uses are which it serves in the economy, the most manifest, though certainly not the only ones, are those which depend upon its physical properties of cohesion, flexibility, extensibility, and elasticity.

The tissue which contains the fat, termed the *adipose*, is the second form of membrane; it is obviously a modification of the cellular, from which it differs both in the magnitude of its fibres, whence it constitutes a tougher and coarser web, and in their arrangement; for it is so disposed as to form distinct bags in which the fat is contained. Adipose tissue consists of rounded packets, separated from each other by furrows; each packet is composed of small spheroidal particles;

each particle is again divisible into still smaller grains, which, on minute inspection, present the appearance of vesicles filled with the adipose matter.

The cells of the cellular tissue, as has been shown, are continuous over the whole body; but each adipose vesicle is a distinct bag, having no communication whatever with any other. The cellular tissue is universally diffused; but the adipose is placed only in particular parts of the body; principally beneath the skin, and more especially between the skin and the abdominal muscles, and around some of the organs contained in the chest and abdomen, as the heart, the kidneys, the mesentery, and the omenta. In most of these situations some portion of it is generally found, whatever be the degree of leanness to which the body may be reduced; while in the cranium, the brain, the eye, the ear, the nose, and several other organs, there is none, whatever be the degree of corpulency. The uses of the fat, which are various, will be stated hereafter.

The third form of membrane is termed the *serous*. Like the adipose, *serous membrane* is a modification of the cellular, and, like it also, it is limited in its situation to particular parts of the body, that is, to its three great cavities, namely, the head, the chest, and the abdomen. To the two latter it affords an internal lining, and to all the organs contained in all the three cavities, it affords a covering. By its external surface it is united to the wall of the cavity or the substance of the organ it invests; by its internal surface it is free and unattached; whence this surface is in contact only with itself, forming a close cavity or shut sac, having no communication with the external air. Smooth and polished, it is rendered moist by a fluid which is supposed to be exhaled in a gaseous state from the serum of the blood; and from this serous fluid the membrane derives its name.

Though thin, serous membrane is dense, compact, and of great strength in proportion to its bulk: it is extensible and elastic; extensible, for it expands with the dilatation of the chest in inspiration; elastic, for it contracts with the diminished size of the chest in expiration. In like manner, it stretches with the enlargement of the stomach during a hearty meal, and contracts as the stomach gradually diminishes on emptying itself of its contents. It is furnished with no blood-vessels large enough to admit the colouring matter of the blood; but it is supplied with a great number of the colourless vessels termed exhalents, with the vessels termed absorbents, and with a few nerves. It indicates no vital properties, but those which are common to the simple form of the primary tissue. Its specific uses are to afford a lining to the internal cavities; to furnish a covering to the internal organs; by its polished and smooth surface, to allow a free motion of those organs on each other, and by the moisture with which it is lubricated, to prevent them from adhering together, however closely, or for however long a period they may be in contact.

The fourth form of membrane, the *fibrous*, named from the obvious arrangement of its component parts, consists of longitudinal fibres, large enough to be visible to the naked eye, placed parallel to each other, and closely united. Sometimes these fibres are combined in such a manner as to form a continuous and extended surface, constituting a thin, smooth, dense, and strong membrane, such as that which lines the external surface of bones termed periosteum, or the internal surface of the skull (dura mater). At other times, they form a firm and tough expansion (aponeurosis) which descends between certain muscles, separating them from each other, and affording a fixed point for the origin or insertion of neighbouring muscles; or which is stretched over muscles, and sometimes over even an entire limb, in order to confine the muscles firmly in their situation, and to aid and direct their action. Fibrous membrane also constitutes the compact, strong, tough, and flexible bands used for tying parts firmly together, termed ligaments, principally employed in connecting the bones with each other, and particularly about the joints; and lastly, fibrous membrane forms the rounded white cords in which muscles often terminate, called tendons, the principal use of which is to connect the muscles with the bones, and to serve as cords or ropes to transmit the action of

the muscle to a distant point, in the accomplishment of which purposes their operation appears to be entirely mechanical.

The fifth form of membrane, the *mucous*, derives its name from the peculiar fluid with which its surface is covered, called mucus, and which is secreted by numerous minute glands, imbedded in the substance of the membrane. As serous membrane forms a shut sac, completely excluding air, mucous membrane, on the contrary, lines the various cavities which are exposed to the air, such as the mouth, the nostrils, the wind-pipe, the gullet, the stomach, the intestines, the urinary organs, and the uterine system. Its internal surface, or that by which it is attached to the passages it lines, is smooth and dense; its external surface, or that which is exposed to the contact of the air, is soft and pulpy, like the pile of velvet. It bears a considerable resemblance to the external surface of the rind of the ripe peach.

Unlike all the other tissues of this class, the mucous membranes are the immediate seat of some of the most important functions of the economy; in the lung, of respiration; in the stomach, of digestion; in one part of the intestine, of chylification; in another, of excretion; while in the mouth and nose, they are the seat of the animal functions of taste and smell; and they are highly organised in accordance with the importance of the functions they perform.

The last form of membrane which it is necessary to our present purpose to particularise, is that which constitutes the external covering of the body, and which is called the *skin*. The skin is everywhere directly continuous with the mucous membranes that line the internal passages, and its structure is perfectly analogous. Both the external and the internal surface of the body may be said therefore to be covered by a continous membrane, possessing essentially the same organisation, and almost identically the same chemical composition. The skin is an organ which performs exceedingly varied and important functions in the economy, to the understanding of which it is necessary to have a clear conception of its structure; some further account of it will therefore be required; but this will be more advantageously given when the offices it serves are explained.

Such is the structure, and such are the properties, of the first distinct form of organised matter. The second primary tissue, termed the cartilaginous, is a substance intermediate between membrane and bone. The nature of its organisation is not clearly ascertained. By some anatomists, it is regarded as a uniform and homogeneous substance, like firm jelly, without fibres, plates, or cells; others state that they have been able to detect in it longitudinal fibres, interlaced by other fibres in an oblique and transverse direction, but without determinate order. All are agreed that it is without visible vessels or nerves; not that it is supposed to be destitute of them, but that they are so minute as to elude observation. Its manifest properties are wholly mechanical. It is dense, strong, inextensible, flexible, and highly elastic. It is chiefly by its property of elasticity that it accomplishes the various purposes it serves in the economy. It is placed at the extremities of bones, especially about the joints, where, by its smooth surface, it facilitates motion, and, by its yielding nature, prevents the shock or jar which would be produced were the same kind and degree of motion effected by a rigid and inflexible substance. Where a certain degree of strength with a considerable degree of flexibility are required, it supplies the place of bone, as in the spinal column, the ribs, and the larynx.

(To be continued.)

NOTICES.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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MEDICINE AND LEGISLATION.

Scarcely has a session of parliament passed away without some effort being made to control the people in reference to the system of medicine they should be compelled to adopt and the mode of treatment to which either they or their children must submit. We have uniformly entered our protest against this kind of legislation, as an undue interference with individual liberty on the one hand, and as an unjust patronage of a monopoly on the other. The advocates for medical reform are to be divided into two classes: the one composed of the allopaths, the conservatives of all old practices and the patronisers of the old, stereotyped profession; the other consists of the men of progress, the scientific and the multitude groaning under the incubus of an incompetent, obtruding, and expensive faculty. It is easy to understand how these two classes, widely differing in their character, will have directly opposite views of the medical reform the country requires. We belong to the latter class, and think that it would be an indication of wisdom if government would let medicine be treated as any other science which develops its principles and its benefits most effectively when it is unembarrassed by legislative enactments and unrestricted by the laws of a bigoted monopoly. But those who clamour for medical reform, under the pretence of preserving the health and lives of the people from the destroying influence of quackery, have no evidence to prove that the system they seek to uphold possesses the power to save the health and the lives of the people from the ravages of disease. And yet it is on the assumption of this proof that their claim is founded. The statistics of any month, and especially of any season of prevailing endemic or epidemic, will be found to be against them, and they will be left without an inch of ground on which they can stand. It is, however, asserted that it is the duty of government to take active measures to preserve the lives of the nation; if this be admitted, then it is the duty of government to put down a system under which thousands upon thousands are dying every year, and thousands more are living sufferers from its administration. If we are to have medical legislation, let us have it upon a right and honest basis—the basis of fact and experience.

There is, according to our judgment, no argument which has hitherto been adduced, sufficient to convince us that the government has any more right to interfere with the subject in his choice of his medical adviser than it has to bind him to the instructions of any spiritual teacher. We do not say that the life of the subject has no place in the category of legislation. The whole criminal code has reference alike to the protection of life and property; it provides punishments against assaults, injuries, and murders, and thus takes cognizance of the safety and life of the subject. The government may, therefore, reasonably take measures to prevent murder, if it has the right to punish the crime of murder. The drugs which are imported into any country are under the supervision of the authorities. In China, opium is prohibited, because it is damaging to the

health and destructive of the lives of the people of that vast empire. It would be well for this country if the legislature would so far protect the health and lives of the people as to shut out of the country the poisonous drugs which are now very largely imported. That most deadly poison strychnine is now more abundantly imported than it was in former years. In the year 1838 duty was paid on one thousand and seventeen pounds of this deadly drug; in 1839, on only four hundred and seventy-eight pounds; in 1840, on five hundred and fifty pounds. Ten years ago a ton of this article would have been considered a large amount for an annual import; it now sometimes exceeds a hundred tons.

We have no means at command to determine with accuracy how this immense quantity is consumed; but we have no doubt, that though a considerable amount may find its way to the shop of the druggist and the dispensary of the apothecary, yet no small portion of it goes to the brewers and the vendors of ale from the wholesale dealer in hogsheads to the retail seller of the tippler's pint. It is, however, ascertained with certainty that tons per annum are consumed among the people of this country. Sanatory laws should extend to the regulation of the import, if not to the entire exclusion, of deadly poisons. If they are to be brought into the country, why not put an impost upon them so heavy as to diminish the quantity, or, if not, to assist the Chancellor of the Exchequer to lessen the duty on French wines, teas, coffees, and other articles which supply the population with wholesome and temperate drinks? Should such a course be adopted by the legislature, the health of the country would be improved, mortality diminished, and the physical tone of the next generation greatly advanced. The entire absence of any poisonous herb, plant, or root from the Botanic System of medicine is one commendation which cannot be too frequently brought before our readers and the public at large. Dr. Coffin's "Guide to Health" furnishes ample and minute directions, so that any man may become his own physician at a very small expense and without fear or danger of being poisoned.

DISEASED TEETH AND ALLOPATHIC MEDICINES.

THE teeth are not unfrequently the seat of the most excruciating pain. When in a healthy state, they are the sign of health, and the instruments of preserving and sustaining the body in a vigorous condition. Mastication is the first process of digestion, but this can be performed well only when the teeth are in good condition. Too much care cannot be taken to prevent any decaying process; for as soon as the first symptoms of decay appear, the deteriorating cause acquires power most rapidly. It is evident to all who will make careful observation, that those who have been brought up under the botanic treatment invariably have sound, healthy teeth, which are their ornament and benefit. It is equally patent that invalids who have been under the care of allopathists, have teeth decaying or decayed. The health of the teeth is chiefly dependent on the state of the stomach and the absence of corroding medicines. It is well known, that among the most obvious results of taking calomel, is the looseness of the teeth in the gums. This is an indication that the muscular fibres which hold the teeth in immediate contact with all the ligaments and vessels which contribute to the good condition of the teeth, and their stability in their own proper places, have been most seriously damaged. Numerous as these cases are, many persons are not aware that this is the beginning of that decay which is followed by the most intense anguish, and the final loss of the teeth. Not only does calomel attack and injure the very foundation of the teeth, but it vitiates all the vital fluids and prevents most effectually the whole nutritive process, which is as needful for the teeth as for any other part of the human frame. The use of mineral acids by allopaths is most destructive of the hard enamel which Nature has provided as the shield and preserving covering of the teeth. While this remains intact, the teeth can receive no injury externally; it, however, does happen sometimes that the enamel is loosened internally, from the effects of calomel, and other injurious medicines.

We have no wish to exaggerate at any time, and we would most specially avoid

it when opposing an antagonist or exposing a system which professes to heal, while it destroys. We have, therefore, furnished our readers with specimens of the miseries induced by carious teeth, which have been published by the allopaths themselves; and we have no hesitation in saying that seven-eighths of these are the results of medicines injudiciously administered.

Case 1.—Elizabeth H——, aged forty, was sent from some distance in the country to the infirmary, Dec. 12th, 1856, to be treated for what she was told by a medical practitioner was a cancerous tumour in the cheek. On examination, a tumour, the size of a small chestnut, was found, with an ulceration of the mucous membrane, just fitting the sharp edge of one fang of a carious molar tooth of the lower jaw, which was making its way from the gum. Being fully assured, from former experience of many cases of a similar kind, that this was the sole cause of the tumour and ulceration, I removed the tooth, and promised her it should be well in a few days. A little lotion was ordered for the mouth. She appeared again on the next out-patient day, Dec. 17th. The ulceration was healed, the tumour gone, and she was discharged cured.

Case 2.—A gentlman from a distant town, where there is a large hospital, happened to have his leg broken in Leeds, and was in lodgings under my care. His wife came to attend upon him, and she consulted me about an ulcerated tumour in the cheek, which had existed a long time, and for which she had had the advice of several surgeons, and various applications used without advantage. I detected one fang of a carious molar of the lower jaw laid horizontally on the gum, but adherent and embedded in it, with the ragged point fitted into the centre of the tumour. I pushed it away with my pencilcase, and the tumour disappeared in a few days. Both these patients were under the impression that they were suffering from cancerous disease.

Sometimes, instead of the cheek, the tongue suffers from the same cause. I have detected many cases of this kind. One interesting example shall be sufficient to explain such cases to you.

Case 3.—More than thirty years ago, one out-patient day, my senior colleague (Mr. Hey) informed me that a few days previously he had incised a malignant-looking tumour from the tongue of a young countrywoman, who was a private patient of his; that, to his surprise, in a few days the tumour had sprouted out as large or larger than before the operation; that, as she was not in circumstances to pay consultation fees, he had requested her to be in the house surgeon's room at twelve o'clock, in order that he might ask Mr. Chorley's opinion, along with my own, on the case. On that day Mr. Chorley did not come to the infirmary, and I went with Mr. Hey to see his patient. There was a foul, dask, fungoid tumour, which occasionally bled, and from which she suffered much pain during every attempt to speak or masticate food; it was the size of a small walnut. On examining it with the finger, I detected two broken incisors (the middle and left lateral of the lower jaw) leaning inwards, and with sharp-pointed edges fitting into the centre of the tumour. I was immediately convinced that these two teeth were the cause of all the mischief, and stated that opinion to Mr. Hey, who appeared doubtful. I said that he would not be justified in applying the ligature, or using any other means, without first waiting to see the effect of the removal of the two broken carious teeth. I never saw the young woman again, but I was informed by Mr. Richard Hey that the teeth were drawn, and soon afterwards the tumour entirely disappeared, without any other means being resorted to.

Sometimes carious teeth produce abscesses in the cheek, neck, and throat; these burst or are opened, and form fistulous sores, which will remain unhealed for months and years unless the cause be removed, just in the same manner as you see fistulous openings in the leg in cases of necrosis, and which remain open for years until the sequestrum is removed.

Case 4.—Soon after I commenced practice, I frequently met a young gentleman of fortune walking about with a piece of black plaster on the left cheek, as large as a dollar. I often wondered what could be the matter, but not being his attendant, I had no business to inquire. After suffering the annoyance of his black plas-

ter for a very long time, and being in London, a friend persuaded him to consult Sir Astley Cooper. He made very short work with him, took his fee, and sent him to a dentist to have a certain upper molar removed, informing him that he would be well in a few days after. His prognosis was verified by the result. This young gentleman is now an old one, and I occasionally meet him; he has never worn his black plaster since, but he has the appearance of a Peninsular veteran who had received a musket-ball in the left cheek.

Case 5.—A few years ago a middle-aged man, residing in the south, and who travels every year with surgical instruments on sale, after transacting business with me, asked my opinion about a fistulous sore which opened on the middle of his whisker on the right cheek. I introduced a probe, and came in contact with the fang of the last molar tooth of the upper jaw. I persuaded him to allow me to draw it, on the promise that he should be well in a few days. I requested him to write by post on the tenth day, and let me know the result. He wrote to say the discharge ceased the day the tooth was drawn, and that it was perfectly well. Now, here was the case of a person in constant communication with surgeons, selling them daily caoutchouc instruments of his own manufacture. He had suffered for a long period, had often taken advice, but had never had the true nature of his disease pointed out to him.

Case 6.—Seven or ten years ago a young woman came under my care at the infirmary with a fistulous sore in the fore part of the throat, within an inch of the sternum. It had been discharging upwards of a year. I probed it; the instrument could be passed in the direction of the molar of the lower jaw on the left side. On inquiry, she said that eighteen months before she had had a tooth drawn at the dispensary, but the fangs of the tooth were left in the jaw. Afterwards an abscess formed, which descended lower and lower till it burst midway between the sternum and pomum Adami. I drew the stumps; it still discharged for a week or ten days, when it got well without any other treatment. I mention the above case to impress on your minds the possibility of the fistulous orifice being at a considerable distance from the offending tooth. The fistulous sores proceeding from carious teeth are generally on the cheek or at the angles of the jaw. On the application of the probe you will often find the instrument pass readily to the interior of the mouth; you have then only to select the proper victim for sacrifice, and you will rarely err in this respect. Where the sinus from the sore to the tooth is short, the discharge from the external sore will generally cease in a day or two after the extraction of the tooth, but where it is long, as in the above case, it may be a week or two.

There is an excellent old adage—"Prevention is better than cure." This applies well to surgery, and especially to such cases as we are alluding to; for, as abscess in these cases always precedes the formation of a fistulous sore, it should be your endeavour to detect these cases at this particular period. I find that several cases of this kind come under my observation every year; the last, about a month ago.

Case 7.—Thomas K—, an Irishman, aged fifty, was admitted as an out-patient on the 2nd of January. His case is set down as abscess in the cheek. The jaw was closed; he could not open his mouth. He came again on the 7th, no better; and it was not till the 14th that I detected the true nature of the case. I examined the mouth, and found two detached fangs of a molar of the lower jaw, carious and loose; he could not open the mouth sufficiently for the introduction of forceps, but I pushed them out with a punch.

Jan. 21st.—He says he could open his mouth comfortably the following day; the swelling had gradually subsided, and he was discharged, cured.

Case 8.—A long time ago, a near relative consulted me about an abscess at the angle of the jaw, on the right side. I suspected its cause, for on pressure I could make pus appear at the edge of one of the molars. He refused to have the tooth drawn until I assured him the abscess would burst externally, and continue discharging till the tooth was removed, and that an ugly, scrofulous-looking cicatrix would remain for life. The tooth was drawn; the abscess discharged itself into

the mouth, was soon well, and left no mark.

Now in both these cases, if the cause had not been detected when it was, in ten or twelve days the abscess would have burst externally, and a fistulous sore would have been the consequence, which would have continued discharging until the teeth had been removed either by nature or art. I have seen scores of such cases. Whenever you extract a tooth in these cases, always examine it carefully; you will invariably find the fang deprived of its periosteum, and sometimes a little sac attached to its root containing pus.

Sometimes, where abscess forms from a carious molar of the upper jaw, the matter, instead of making its way to the cheek, gets into the antrum. I have seen several cases of this kind, and have at present a private patient under treatment. Remove the tooth, and if this does not give a sufficient outlet for the matter, perforate the antrum with a joiner's gimlet. There has been a very interesting case of this kind recorded in the journals during the present month.

Case 9.—A horse was condemned to the knacker's yard as being afflicted with glanders, having a foul, offensive discharge of purulent matter from the nostrils, and being in the last stage of emaciation. A veterinary surgeon finding it could not masticate its food, examined its mouth, and detecting a carious tooth in the upper jaw, extracted it. The discharge ceased; the horse soon began to thrive and got well. Here was a case in which there was as much professional credit due to the surgeon as if, instead of saving a horse from the knacker's yard, he had saved the life of an alderman. I was speaking yesterday on the subject to my friend, Mr. Louis Oxley, the dentist, and he related to me a case of such interest that I requested him to write it out for me. Here you have it in his own words:—

Case 10.—A young woman, of rather strumous habit, complained of a dull, aching pain under the orbit. The pain lasted from three to four months, attended by a gradual elevation of the orbital surface of the maxillary. The eye above this surface became at length so affected as entirely to lose its functions. At this stage of the case the young woman, who was attended by a general practitioner, who ignored dental surgery and pathology, resorted to leeches, blisters behind the ears, and drastic purges: I need not say ineffectually. After two or three months' loss of the sight, the young woman first perceived a discharge from the right nasal fossa of a thick, purulent fluid. This discharge had existed for eighteen months when I first saw her, *even in spite of the aforesaid remedies!* An examination of the mouth at once revealed the cause of so much misery, and the removal of three roots in a state of periostitis was the simple means by which two most important organs regained their proper functions.

There is another case in which swelling, inflammation, and ulceration at the sides of the tongue take place, and which does not appear, so far as my experience goes, excepting in individuals approaching to or upwards of sixty years of age; but I have seen several cases of it, and shall proceed to describe the cause. If you will examine the form of the molars of the lower jaw where they come in contact with the sides of the tongue, you will find the line from the neck to the top of the crown gives a convex outline, so that for thirty or forty years during the act of speaking or mastication the sides of the tongue come in contact with a smooth, rounded surface; but the constant grinding of hard food, such as biscuits, &c., for two score years, where all the teeth have remained sound, wears away one-third of the upper part of the teeth, the bony part is worn away deeper by one-eighth of an inch than the enamel, leaving a sharp edge projecting into the mouth, so sharp that, by firmly pressing the finger and drawing it along the edge, you might cut it to the bone. The friction of the tongue against this sharp edge produces the effect I have described. It is only necessary to round off the edges by the use of a fine file, and the tongue will soon heal. The operation will require to be repeated in a few years.

Now, gentlemen, I conclude most of you intend to practise the three branches of the medical profession, or to become what is called general practitioners. The study of the anatomy and physiology of the teeth is in general too much neglected; it is a most interesting subject, and sur-

geons often make serious mistakes who are ignorant of it. There are those who take a pride in confessing their ignorance of some parts of their profession—midwifery and dentistry, for instance. I hope you can all with me feel a sincere pity for such.

Case 11.—Many years ago, a patient of mine went with her family to a fashionable watering-place. One of her children, nearly four years of age, was taken ill, and a surgeon of some eminence was called in, who attributed its illness to teething, and lanced its gums. Now he ought to have known the child had cut all its first set of teeth nearly two years previously, and, as I hope you all know, that it would be at least three years before another tooth would be ready to perforate the gums. These are the sort of errors you will commit if you remain ignorant of this subject when you are in practice.

THE TOBACCO QUESTION.

(Concluded from page 283.)

To the Editor of The Lancet.

Sir,—The "Tobacco controversy" has acquired a publicity which claims the decision of the medical profession. The question, "Is smoking injurious?" must now be answered positively, either in the affirmative or negative. The opinion of medical men who are habitual smokers certainly is not of any weight. Tobacco, like other stimulating narcotics, beguiles the senses of its votaries, so that the morbid symptoms which it produces are masked by the pleasurable sensations which it excites.

Passing by the mucorrhœa from the air-passages, the gastric irritation, the coldness and dampness of the extremities, the hebetude and depravation of all the senses, permit me to state a pathological fact which, to every reflective mind, cannot fail to settle the controversy; and it is this:—As physician to a dispensary in St. Giles's, during sixteen years, I had extensive opportunities of observing the effects of tobacco upon the health of a very large number of habitual smokers. The extraordinary fact is this: that leeches were killed instantly by the blood of the smokers, so suddenly that they dropped off dead immediately they were applied; and that fleas and bugs, whose bites on the children were as thick as measles, rarely if ever attacked the smoking parent. It may be said, "but why may not this poisonous effect upon leeches, fleas, and bugs, be owing to gin and not tobacco?" The answer to this objection is, that the Arabs and Bedouins, who drink neither wine nor strong drink, are protected from the onslaught of the insects, which swarm in their tents, by poisoning their blood with tobacco, whilst the wine and spirit-drinking Europeans are attacked without mercy. What is so fatal to insect life cannot be otherwise than most formidable to the life of persons whose blood is thus poisoned. If the evil ended with the individual, who, by the indulgence of a pernicious custom, injures his own health and impairs his faculties of mind and body, he might be left to his enjoyments—his "fools' Paradise" — unmolested. This, however, is not the case; in no instance is the sin of the father more strikingly visited upon his children than the sin of tobacco-smoking. The enervation, the hypochondriasis, the hysteria, the insanity, the dwarfish deformities, the consumption, the suffering lives and early deaths of the children of inveterate smokers, bear ample testimony to the feebleness and unsoundness of the constitution transmitted by this pernicious habit.

How is it, then, that the Eastern nations have not, ere this, become exterminated by a practice which is almost universal? The reply is, that by early marriage, before the habit is fully formed or its injurious effects decidedly developed, the evil to the offspring is prevented; but in this country, where smoking is commenced early and marriage is contracted late in life, the evil is entailed in full force upon the offspring. Adulterations of all kinds are bad enough, but the adulteration by a narcotic—poisoning the life at its source, the breath; and in its course, the blood—is worse than all. By these adulterations, the health of the community is injured; by this, a man injures his own health and that of his children. Ought not this consideration to restrain every wise and good man from contracting or continuing such a senseless and destructive habit of self-indulgence? For old

men, smoking may be tolerated; but for young men and boys, it cannot be too severely reprobated.—I am, sir, yours, &c.,

J. Pidduck, M.D.

Montague-street, Bloomsbury, Feb., 1857.

Sir,—I have derived much pleasure and instruction from the perusal of an excellent letter from the pen of Mr. Solly, which appeared in your journal of the 7th inst. The benefits that may arise from a discussion of the effects of smoking are incalculable, especially if accompanied by illustrative cases, some of which I hope soon to be able to forward, in answer to the wishes of your correspondent.

With respect to the baneful effects of *excessive* smoking, there cannot be two opinions on the subject, especially when attended by free expectoration. As regards the *moderate* use of tobacco (I should say, one cigar or one pipe twice a day), I have failed, by the most careful examination, to discover any evil effects in those cases which have been subjected to close observation. In fact, I have allowed those patients who did not exceed the quantity above mentioned to continue its use as a *harmless comfort.*

To arrive at a proper conclusion, we require the aid of a few correct statistical tables, stating—1st, the average quantity of tobacco consumed in a week or month by each individual; 2nd, the periods of smoking, whether immediately before or after meals; 3rd, the beverage used; 4th, the kind of tobacco employed; 5th, the length of time in which the habit has been indulged; and, lastly, the amount or absence of expectoration. Such tables would prove of great value to the medical practitioner; for how often is he consulted by patients (especially those of a phthisical tendency) on the propriety of discontinuing the use of tobacco! and how little of certainty has he to enable him to decide whether or not he should deprive his patient of *one*, perhaps of the very few luxuries that are within his reach!

I was sorry to find that your eminent correspondent had not furnished us with a few remarks on the use of snuff—a form of the weed which is far more seriously indulged in from its portability, &c., and which, I fear, is more injurious in its effects upon human life. Amongst the striking examples of excess in this habit and its evil effects, the great Napoleon would have afforded one of the best; and how many more great men could be mentioned as instances? While it may be questioned by some of your readers, if we really are furnished with the *happiest* examples of greater energy, clear-sightedness, decision, and success resulting from the disuse of the "noxious weed" in the cases adduced of our late respected commanders (General Markham excepted). At least, we might say of one of them, if he could be so irritable when "his pipe was out," what must he have been with it "in a blaze," on the theory of irritation maintained by Mr. Solly? On the other hand, the mighty Newton was an extravagant smoker; and did he not suffer from paralysis at a time when his intellectual powers were comparatively at rest?

Trusting that this subject will be thoroughly worked out by those who have opportunities,—I am, sir, yours obediently,

Duncan Smith, M.R.C.S., &c.

Upper Belgrave-place, Feb., 1857.

Sir,—Having been much interested by a discussion in your paper on this question, I wish to lay before the profession a few facts which have come under my notice, and which will, I think, help to prove that excessive smoking is one of those "pleasant vices" of which the "just gods make instruments to scourge us." More especially would I direct attention to the depressing influence of tobacco on the sexual powers. I feel confident that one of the most common, as well as one of the worst, of its effects is that of weakening and, in extreme cases, of destroying, the generative functions. I can illustrate this by a case which came under my notice recently, and one which I believe to be by no means rare. My attention had just been directed to the subject by Mr. Lizars' admirable pamphlet, when a gentleman called to consult me, as he found himself impotent. He was a young man, in apparently good health, and his generative organs showed no signs of disease or decay. He stated that it was only during the last few months that he had found his desire for connexion gradually decreasing, and that, when he did

attempt it, his efforts were altogether futile, or only consummated after a long interval. On inquiry into the supposed cause, amongst other matters, I found he had latterly become a great smoker, sometimes smoking a dozen cigars a day. Without particularly directing his attention to that point, I ordered him to confine himself to one cigar a day, at the same time ordering him a "placebo." At the end of a fortnight he called again, saying he was very much improved; he had greater desires, and more power of satisfying them. I now told him he might resume his smoking, but continue the medicine, to which he attributed all the benefit, telling him that he need not call again unless he found himself worse. In a few days he returned with exactly the same symptoms as at first. I was now convinced of the cause, and ordered him entirely, though gradually, to leave off the habit. He was at first unwilling to submit; and it was not until I had repeated my former experiment, with, if possible, more positive results, that he consented. He has, I am glad to say, perfectly carried out his good resolutions, and with a perfectly successful result.

This case, I think, satisfactorily proves that, in some persons at least, tobacco is not the harmless luxury many would make it, and I am sure this case has many parallels.

Hoping that the discussion which you are so ably keeping up may prove effectual in somewhat abating the existing "smoke nuisance," I beg to subscribe myself,

WALTER TYRRELL, M.R.C.S.

St. Helen's-place, Bishopsgate, Feb., 1857.

"From 1851 to 1856, France, according to the *last* census, has gained *only* 256,000 inhabitants. In the same number of years, from 1841 to 1846, the increase was 1,200,000. The difference is enormous."—(See "The Times," Jan. 29th, 1857.)

Sir,—The following figures will tend much to prove my assertion of the baneful and pernicious effects of smoking:—According to a statistical work lately published on the consumption of tobacco in Paris, the quantity of tobacco consumed in smoking, in 1854, was nearly *double* that of 1839, and that of cigars five times as much; while that of snuff, on the contrary, presented a marked diminution.

It is calculated that the number of smokers in Paris, including the garrison, is about 420,000; and the total consumption gives 1 kilogramme and 973 centigrammes (or 32 ounces, 4 drachms, 42 grains) of tobacco, 143 cigars, and 4 cigarettes for each person; or, calculating the cigars at 250, and the cigarettes at 1000 to the kilogramme, it would be 2 kilogrammes and 749 centigrammes (or 64 ounces, 3 drachms, and 42 grains) for each. In England, the consumption is calculated at 16 ounces only a head.

There are *two* tests that we might apply as to the injurious effects of smoking:—

1st. I will take the most *exemplary and moral* class of men (at least they have the credit for being so), Quakers. Smoking, I believe, is *never* practised by them; but in applying the test to them there is one *drawback*—they belong to the *sedentary* class, and are never given to field sports and athletic games.

2ndly. The *longevity* of another body of men, clergymen; but this I must confess is a more difficult test, since most of them served an apprenticeship to the vice when at college; but still, *after* they are ordained, permission is *never* granted them by their bishops, unless a *very strong* case is made out for the indulgence (?).

Now, insurance companies, by reference to their books, might furnish us with valuable statistics in applying the two above-named tests. The teetotallers commenced at the wrong end; they should have first put down the pipe! However, it is not too late for them to begin the good work. The teetotaller *who breaks his pledge* is always a smoker.

I am, Sir, your obedient servant,

J. B. NEIL.

February, 1857.

Sir,—Never having smoked a pipe or cigar in my life, I am unable to testify individually as to the charms of the weed, or its influence on the nervous system. The returns of the Commissioners in Lunacy certainly do not support Mr. Solly's opinion as to its pernicious influence upon the mental powers of smokers, since I find by the last report that female

lunatics exceed those of the opposite sex by a considerable number. I can easily conceive that indulgence in tobacco to excess must prove equally injurious as indulgence beyond proper limit in any other sedative or stimulant, whether food, wine, or opium. The subject is one of great physiological interest; and I would suggest that those gentlemen who have the means of tracing the *history* of lunatics under their care should carefully investigate each case, and forward the results to the secretary of the Association of Asylum Officers, who would perhaps, at the next annual meeting of the body, favour the medical world with the statistics of such information.

I am, Sir, yours obediently,

J. F. Watson, M.R.C.S.

Norwich, February, 1857.

Sir,—I wish to trespass on your valuable space with a few remarks on the universal question, whether smoking is injurious or not? I have given much attention to it, and think that, like most things, it is the abuse that causes the ill effects. In moderation, smoking acts as a gentle quietus to the system, causing digestion after a full meal and strong exertion, being, under those circumstances, a boon to the rich man as well as the poor. Do away with it in this age of competitive excitement, &c., and would not our cemeteries and asylums increase? I agree that sedentary life is not compatible with smoking.

Is smoking in moderation either morally or physically injurious to man or his offspring? or, taken as a whole, is it sanatory? These are vital queries.

I remain, Sir, your obedient servant,

T. C. Wood, M.D.

Westbourne-green, Feb. 4th, 1856.

Sir,—As a practical man in the art of smoking, I may perhaps be allowed to venture an opinion on this subject. From moderate smoking I have derived much benefit; it has removed time after time headache and an uneasy sensation in the gastric region. I believe it to be useful as a laxative, an excellent *sedative* in pharyngeal and gastric irritation, and in "hyperæsthesia." I confess I have suffered an uneasy sensation in the cardiac region from the *abuse* of tobacco; but this sensation would bear no comparison to that which I should feel were I to be convinced that a moderate indulgence in tobacco were suicidal, and therefore morally obliged to forego my habitual "whiff." When we hear so much now-a-days of the *awful* effects of stimulants, I think we should be placed in a dilemma were we to admit the *awful* effects of sedatives. I contend that as a luxury, not as a requisite (except from habit), tobacco in moderation may be enjoyed without injury to health.

I am, Sir, yours faithfully,

Walter Sumpter.

Horncastle, February, 1857.

MAN AND HIS STOMACH.

A man with a stomach carries about with him a most mysterious piece of mechanism. Simple as the form and contrivance of it apparently are, it contains the most inscrutable secrets of nature—secrets which have baffled the art and skill of all science, and seem likely to confound the experience of the wise for ever. In fact the stomach is unsearchable and unexplainable. It is an unfathomable mystery. Every man is a student of it, but no man understands it. One stomach eats what another rejects; and one rejoices in the same food that another abhors; the stomach, therefore, is not a homogeneous thing; it is an individual peculiarity, and moreover it is characterised by one phasis of disposition to-day and another to-morrow, and these phases defy the power of analysis, chemical or animal, so that the ablest philosophy is bewildered in its attempts to determine the course of treatment which the stomach requires.

It is a sad thing to be always thinking at table what you shall eat, and what effect it will produce; and yet there are men who dare not indulge in the slightest convivial pleasures without meditating and calculating the result with a most anxious expression of countenance; nay, there are entire families who give themselves up to the study of a dietary philosophy, and have a long list of dishes which they prescribe for themselves and for others with an inflexibility and a prejudice which is perhaps the result of

former experience, but which is now confirmed merely by obstinacy and repeated assertion. Whether this be the result of imagination or of chemical action, perhaps no science can determine; but the result is the same with respect to life and its movements; and indeed the minute analysis of the laws of animal agency would probably lead us to something as spiritual as imagination itself in investigating the primary agents which form the constituents of our nature. But it is a puzzling thing for a chemist to determine whether a feeling should be characterised as acid or alkaline, and by what reagency it is to be neutralised; and yet all feelings have these characteristics, and are known in the language of common use by the names of the very substances which compose the material elements of nature, as if the two classes of existences were merely one; at all events we have only one language to describe them both. We all know what an acid feeling is, we know what a bitter feeling is, and we know what a sweet feeling is; and we understand the mode of neutralising these feelings in spiritual as in temporal things, by contrast or reaction; but the infinite nicety that is required to adjust the conflicting parts and harmonise the discordant elements, subjects us to a series of inquietudes for life, which no wisdom can ever tranquillise and no philosophy can illustrate.

Happy is the man who does not feel that he has a stomach, whose food reposes like a sleeping child, and undergoes the natural process of assimilation without either rising in his throat or murmuring in his chest. Such a man's mind is most probably at ease, for there is much intimacy between the stomach and the soul, the one being the exponent, in most cases, of the health of the other.

How to give rest to a weary stomach is one of the most anxious inquiries of life, and probably costs more painful reflection than the preservation of life itself. There is always a burden to be borne or a craving to be resisted; always a battle between a man and his stomach, either in giving too much or in refusing to give, and the bewildering conclusions to which experience leads seem to come at last to no definite result, but leave a man sometimes as inexperienced in age as in riper years. Whether this be the consequence of individual folly, or of individual constitution, is a most important inquiry to every individual; for in the one case the error may be corrected, and in the other not. It behoves every man however to endeavour to discover this, but at the same time to beware of obstinacy in mistaking mere transient sensations for permanent experience. The man who refuses to take a glass of water at twelve o'clock to-day, because yesterday he took the water and suffered severely from it, is a man whose philosophy is based rather on the accidents of the case than on the nature of the elements. Such a man's logic may be right in a formal way, but not satisfactory in a practical one; and yet such is the philosophy that most people follow; that is to say, their premises being as far from akin in the one case as in the other.

There are things that are sweet to the palate and bitter to the stomach, and the reverse. Some fermenting process seems to go on that entirely revolutionises the character of the food, at one time creating a burning sensation of thirst, and at another time inundating the glands with an unnatural salivation. Medical science enables us to correct this in part. If we have got acidity in the throat, we can correct it by the addition of a little alkalinity, and experience in many countries has taught the people how to accommodate their food and their beverage to the requirements of the climate; as, for instance, people in some countries refuse to eat grapes alone, they prefer them with bread, the alkaline principle of the bread being the neutral agent to tranquillise the acidity of the grapes. Nature is thus very deceitful, alluring us, in the first place, by agreeable sensations, and then confounding us with their disagreeable reaction.

This primary fact apparently seems to be intended to keep our judgment on the alert, for we might otherwise, like mere children, follow only our early impressions, without any foresight into the consequences of our conduct. Now, all wisdom lies in foreseeing consequences, and the main difference between the man and the mere animal lies in the fact that the one

sees long before him, and the other does not. It is true that the animal is guarded by instinct from making a wrong choice in the selection of its food; but this is the result of nausea and repulsion, not of reflection. Our reflection is little more than a projection of the principle of instinct into the future, which puts forth its feelers and determines distant results by the aid of a longer instrument of judgment than the animal possesses. Yet some animals seem to require no judgment whatever in the selection of food; the barn-door fowl, for instance, lives indiscriminately on the produce of the farm-yard, and is equally attracted by animal and vegetable diet, its own omnivorous nature making no distinction between the one and the other. This may be called a specimen of happy stomach temperament, which it does not fall to the lot of man to enjoy; but whether it be worth the object of a man's ambition to aspire to it or not, is a question which we must leave to the metaphysical mind to determine for itself; suffice it to say, that the lowest forms of material being appear to be gifted with the greatest power of material digestion, so that the shark, which is capable of devouring and digesting leather and iron, has a stomach as far superior to that of a man as a man has a brain superior to that of a shark. Thus it is, Nature is strongest in her lowest and weakest in her higher departments, and the balance is thus cast between the beast at the bottom of the scale and man at the top. Let us be patient then, and thankful that we have at least got compensation for any privation that we endure. Perfection is out of the question; let us not aim at it, but wisely endeavour to balance the evils of life by means of their corresponding goods. We should then get on and act wisely, and we should find that even the sorrows of life have their compensations, and that though evil cometh of a night, joy cometh in the morning.—*Family Herald.*

THE TISSUES OF THE HUMAN BODY.

(Continued from page 288.)

The third distinct form of organised matter is termed the osseous tissue. Bone is composed of two distinct substances, an animal and an earthy matter: the former organic, the latter inorganic. The animal or organic matter is analogous both in its nature and in its arrangement to cellular tissue; the earthy or inorganic matter consists of phosphoric acid combined with lime, forming phosphate of lime. The cellular tissue is aggregated into plates or laminæ, which are placed one upon another, leaving between them interspaces or cells, in which is deposited the earthy matter (phosphate of lime). If a bone, for example, the bone called the radius, one of the bones of the fore-arm, be immersed in diluted sulphuric, nitric, muriatic, or acetic acid, it retains its original bulk and shape; it loses, however, a considerable portion of its weight, while it becomes so soft and pliable, that it may be tied in a knot. In this case, its earthy matter is removed by the agency of the acid, and is held in solution in the fluid; what remains is membranous matter (cellular tissue). If the same bone be placed in a charcoal fire, and the heat be gradually raised to whiteness, it appears on cooling as white as chalk; it is extremely brittle; it has lost much of its weight, yet its bulk and shape continue but little changed. In this case, the membranous matter is wholly consumed by the fire, while the earth is left unchanged. Every constituent atom of bone consists, then, essentially of animal and earthy matter intimately combined. A little more than one-third part consists of animal matter (albumen), the remaining two-thirds consist of earthy matter (phosphate of lime); other saline substances, as the fluate of lime and the phosphate of magnesia, are also found in minute quantity, but they are not peculiar to bone.

In general, the osseous tissue is placed in the interior of the body. Even when bone approaches the surface, it is always covered by soft parts. It is supplied with but few blood-vessels, with still fewer nerves, with no absorbents large enough to be visible, so that though it be truly alive, yet its vital properties are not greatly developed. The arrangement of its component particles is highly curious; the structure, the disposition, and the connexion of individual bones afford striking examples of mechanism, and

accomplish most important uses in the economy, but those uses are dependent rather upon mechanical than vital properties. The chief uses of bone are—1. By its hardness and firmness to afford a support to the soft parts, forming pillars to which the more delicate and flexible organs are attached and kept in their relative positions. 2. To defend the soft and tender organs by forming a case in which they are lodged and protected, as that formed by the bones of the cranium for the lodgment and protection of the brain; by the bones of the spinal column for the lodgment and protection of the spinal cord; by the bones of the thorax for the lodgment and protection of the lungs, the heart, and the great vessels connected with it. 3. By affording fixed points for the action of the muscles, and by assisting in the formation of joints to aid the muscles in accomplishing the function of locomotion.

All the primary tissues which have now been considered, consist of precisely the same proximate principles. Albumen is the basis of them all; with the albumen is always mixed more or less gelatin, together with a minute quantity of saline substance; to the osseous tissue is superadded a large proportion of earthy matter. With the exception of the mucous, the organisation of all these tissues is simple; their vital properties are low in kind and in degree; their decided properties are physical, and the uses they serve in the economy are almost wholly mechanical.

But we next come to a tissue widely different in every one of those circumstances—a tissue consisting of a new kind of animal matter, and endowed with a property not only peculiar to itself, but proper to living substance, and characteristic of a high degree of vital power. Muscular tissue, the fourth distinct form of animal matter, commonly known under the name of flesh, is a substance resembling no other in nature. It consists of a soft and pulpy substance, having little cohesive power, arranged into fibres which are distinctly visible to the naked eye, and which are disposed in a regular and uniform manner, being placed close and parallel to each other. These fibres are everywhere pretty uniformly the same in shape, size, and general appearance, being delicate, soft, flattened, and though consisting only of a tender pulp, still solid. When examined under the microscope, fibres, which to the naked eye appear to be single threads, are seen to divide successively into smaller threads, the minutest or the ultimate division not exceeding, as is supposed, the 40,000th part of an inch in diameter. On the other hand, the fibres which are large enough to be visible to the naked eye, are obviously aggregated into bundles of different magnitude in different muscles, but always of the same uniform size in the same muscle.

The ultimate thread, or the minutest division of which the muscular fibre is susceptible, is called a filament; the smallest thread which can be distinguished by the naked eye is termed a fibre; and the bundle which is formed by the union of fibres is denominated a fasciculus. The proper muscular substance is thus arranged into three distinct forms progressively increasing in size—the filament, the fibre, and the fasciculus. The filament, the fibre, the fasciculus, as well as the muscle itself, formed by the aggregation of fasciculi, is each inclosed in its own distinct sheath of cellular membrane.

(To be continued.)

NOTICES.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury Branch.

NOTICES TO CORRESPONDENTS.

Our Correspondent "MOXLEY" should bear in mind, that this Journal is not intended as a medium for conveying medical advice in particular cases These should be sent to Dr. COFFIN, at 134, High Holborn. The ailment described is not an uncommon one in the *circumstances* of the patient. The only remedy is a recumbent position, as often and as long as possible.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
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AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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DENTITION.

I have received several letters on this subject recently, in consequence of some remarks that were made in the leading article in *Coffin's Botanic Journal*, No. 230, vol. 7. As I do not approve of those remarks, and did not see them until the Journal was printed, I consider it my duty to say, I entirely repudiate them. In the description of the effects of tobacco, the writer says, "Existence in them is a struggle from the beginning, and many of them *sink in the conflict of dentition*, and those who *survive* this *trying period*," &c. Now, then, there is no more *conflict* in dentition than there is in the *hair growing*, or the bones enlarging; and, however painful it may be for me to contradict the statement of the writer, yet truth and consistency on my part demand that it should be done. I repeat to my friends, that dentition is a natural and necessary operation in the child. Admitting that, that, as well as any other developement, is retarded, when there is a deficiency in the circulation, and that the bones, or muscles, or hair, or nails, feel as much the want of that circulation as the *teeth*.

A. I. Coffin, M.D.

24, *Montague-place, Russell-square.*

MEDICAL BOTANY AND EMIGRATION.

Of all the studies to which the emigrant may give his attention, none is more important than Medical Botany. It is an admitted fact that there are some diseases peculiar to one part of the world, which are almost unknown in other parts; and that, in the arrangements of an all-wise Providence the most efficient antidotes spontaneously grow, whatever may be the bane of any particular climate. This has been illustrated in the records of antiquity, anterior to the days of Paracelsus, who has the credit, if any credit is due on that account, of first introducing mineral medicines. It is also confirmed by the practice of the American Indians and all the tribes of man which have not been diverted from their original simplicity by the influence of civilisation. Among these untutored savages we find a system of medical treatment peculiarly their own, but one which is invariably attended with a far greater amount of success than that adopted by the so-called faculty of this country. The emigrant need not take with him the cumbering medicine-chest, the contents of which will do him harm instead of doing him good, if it be filled, as it usually is, with antimony, calomel, and other deleterious mineral preparations. If he take with him a medical chest at all, it should be stored with a judicious selection of Botanic Medicines, enough to cure any maladies attendant on a sea voyage, and a little more to last him for a month after his arrival, thus giving himself time to know and to gather and prepare the most appropriate herbs, which he is sure to find in the best condition and in great abundance. But in the event of his not being able to obtain a Botanic Medicine-chest, the best thing he can do is to make a study of the medicinal properties of plants, a most important part of his preparation for a sojourn in the new country.

We have been induced to introduce this subject to the attention of our readers by a letter before us from Tasmania. In this document we have a glowing description of the climate and the fertility of the soil. Here are plants and flowers in endless variety, and the writer learns that many of the plants possess very powerful medicinal properties; but he says, "Never before did I so deeply regret my entire destitution of botanic knowledge. One of my children suffered for three days and three nights; and, far away as we are from any medical adviser, we could do nothing but witness his sufferings without having any means at our command to mitigate or arrest the disease." The writer goes on to say, "My agony at the loss of my lovely boy has this day been greatly aggravated by meeting with K——, the first time I have seen him since I have been here. He had one of his little boys with him. I said, 'I am pleased to see him looking so well;" when his father said, 'So am I, for he has had a sharp illness like that which seizes all children soon after they arrive;' but he added, 'thank God, we have the best Apothecaries' Hall in these herbs around us. I had got a knowledge of plants and their use, as medicines, before I came out; and, by gathering and boiling a few together, we made some medicine and gave it him; and he was ill only two days; though, as I said before, it was a sharp illness.'"

These facts are worth twenty arguments about the theory of Botanic Medicine. Knowledge is never an encumbrance to any man in any circumstances; but, let bereaved parents tell what is the value of knowledge in a far-off land, where it serves as the potent remedy against disease, and the instrument of wresting a precious child from the pangs of pain and the jaws of death. The facilities for acquiring this knowledge are now available by the humblest individual. The principles of Medical Botany are so simple, that, when once acquired, they may be put into exercise in every part of the globe wherever man's lot may be cast. Plants of any given class and order, in all their varieties, possess the same properties to a greater or less degree. So that if a man knows the shape and form and colour of an herb, and also its medicinal qualities, he also know that those qualities will be found in all the herbs which have the same external characteristics. Mistakes have, sometimes, been made between health-giving and deadly herbs; but these mistakes have chiefly arisen from a want of sufficient care in noticing the distinctive characteristics. Too many professed students of botany and of other sciences are contented with hastily skimming the surface, and withholding that patient, continued, and close attention which is essentially necessary to attain a thorough acquaintance with the subject. We, therefore, advise those who intend to emigrate to seek, as early as practicable, a thorough knowledge of the science of Medical Botany, that, when they reach the shores of their adopted country, they may derive the full advantage from the indigenous vegetable productions of the soil, and be the instruments of conferring a benefit upon their families by speedily applying those remedies which will effectually arrest the progress of disease.

We further invite our readers to the following excellent article upon the subject of emigration, which we extract from a weekly journal:—

Whilst the newspapers are teeming with distressing accounts of the destitution of tens of thousands of our British operatives, both in the metropolis and in the provinces, we have had handed to us an extract from the *Canadian News*, published in London every fortnight, in which is an account and description of a district of land in Canada, on which the government are granting to settlers free portions of 100 acres each, on certain conditions, easy of accomplishment, and advantageous in themselves to the settlers.

The tract in question lies on the south side of the river Ottawa, in Canada West, and north-west of the Grand Trunk Railway, which was recently opened, and which extends already from Quebec to Buffalo on Lake Huron, passing through Montreal and Kingston, with branches to Portland, on the Atlantic, and Hamilton, Detroit, and other places lying on the shores of the inland lakes. A branch of this railway is also intended to be laid down to the site of the "free grants," a section of which, as far as the town of Ottawa, is already constructed. This will

give the settlers a direct communication with the great markets for their produce, without the trouble and expense of constructing other high roads; a work always heretofore the most laborious and expensive the settlers in our colonies have had to encounter.

The advantages of emigration to Canada, in our opinion, are far greater than to any other British colony. That country is now, *under self-government*, making unexampled progress, and bids fair, in a few years, to rival its neighbour, our Brother Jonathan, in all that pertains to national prosperity. Emancipated from the arbitrary mandates of a *Home* Colonial Minister, appointed not because of his superior knowledge of his business, but from party motives alone, and equally freed from the overbearing ascendancy of a state-paid Church, the Canadians have now only their own business to attend to, and they have, in earnest, devoted their whole efforts to the advancement of their country in civilisation and physical prosperity.

The grants of land of one hundred acres each are awarded to any person of any nation who has attained the age of 18 years. He must take possession within one month, and build a log-house of at least 18 feet by 20 feet. He must put into cultivation at least twelve acres of his land within four years, residing on the lot himself during that period. The government having formed the necessary roads of the district, the settlers will be required to keep them in repair. And as the Colonial Legislature have caused the incorporation of a company for the construction of the railway connected with that at Ottawa, which will run right through the centre of the "free grants," it will be only the local roads that will require attention. In addition to this, the river Ottawa has been surveyed by order of the government, with the ultimate intention of "rendering it navigable to Lake Huron" (we presume by a canal to Georgian Bay), "enabling vessels of large tonnage to pass by that route from the north-western waters to unite the river St. Lawrence, and thence to the Atlantic Ocean."

One more condition is added to those required of the intended "free settlers," without which, indeed, no one is qualified, in any case, to become one. This is the possession of at least £50 in cash to support himself and family until his land has produced a return. This may be supposed to be a bar to any of the unemployed in this country ever hoping to obtain a grant. Not so; for the demand for labour in all parts of Canada West is such that a man who is able and willing to work may earn such wages as will, in a comparatively short period, place him in a position to take up his 100 acres, and make himself an independent farmer of his own land. Such are the advantages offered to emigrants to Canada at this time.

There is one more condition, not indeed insisted on by the government, but of the utmost importance to the settler himself. This is *abstinence from intoxicating liquors*, that curse of the "Old Country," which is the cause of so much crime and misery to the lower classes. Abstinence —*total abstinence*, however, is doubly incumbent on the settler in a new country; for all his success depends upon the retention of his physical powers, which, beyond a doubt, are weakened by the use of ardent spirits or any alcoholic drinks. "No one," says the paper handed to us, "no one can prosper if he be not sober. Without sobriety he will not have strength to undergo the fatigues of his daily labour; and, besides, an intemperate man will immediately become a marked one. In the rural districts total abstinence is the almost universal practice; *and if the farmers only were to return members of the Legislature of Canada, a Maine law would be quickly enacted.*"

Such are the advantages and such are the requirements of emigration to Canada; and we again express our opinion that that country is superior, in point of permanent and growing prosperity, to any other of the British colonies. The system of railways so boldly commenced will be carried out to every part of British America, connecting them with each other and with the United States, and the whole of the Atlantic seaboard; so that those portions farthest remote hitherto from Europe will be brought, by the nearest route by which either persons or produce can make the transit, to the shores of the "Old Country."

A disagreeable smile distorts the lines of beauty, and is more repulsive than a frown.

PERILS BY THE WAY.

"God be with you, my dear boy," said Mrs. S. to her son Edwin, a fine youth of about seventeen, who was for the first time leaving the home of his childhood and youth, and the quiet of a country life, for the noise and bustle of the great metropolis; "God be with you, to guide and keep you in all your ways, when far from the shelter of this humble roof, and from the hearing of your mother's voice. I have heard much of London—its gay scenes and its great temptations; especially for those who, like yourself, are inexperienced and unsuspecting. Oh! beware of its specious allurements and corrupting influences. You will find the pocket Bible among your clothes, and I hope you will make it your best and constant companion. Ask your parents' God to grant you wisdom to understand it, and let me beg of you to remember that you cannot neglect God's book without wronging your own soul." Once more the widowed mother embraced her only son, wept over him, and in a few moments his form was lost to her view, and his footsteps had died away upon her ear.

Edwin, though so young, was not insensible of the importance of the step he was taking, and his mind was variously exercised in the prospect of new scenes and circumstances. At one time his thoughts dwelt upon the past, which, with him, had resembled—

"Vernal sunshine, intermixed with rain,"

for the bright season of youth had not been without its sorrows. He had tasted of "the wormwood of affliction," as well as of the honey of domestic and social enjoyment. Once he had known a father's love, his sunny smiles, his wise counsels, his fervent prayers, and the moulding influence of his holy example. Nor could he forget that dark day, when the great spoiler entered their happy cottage home, and, regardless of the tears of affection and the cry of distress, dissolved the tenderest ties, and inflicted pangs which none but the widow and fatherless can know, and which none but the omnipotent and compassionate Jehovah can heal. He also remembered that since that mournful event it had been his constant endeavour to assuage his mother's grief, to cheer her solitude, and, by the exercise of dutiful and affectionate attentions, to relieve, as much as possible, the pressure of that heavy calamity. And now his afflicted mother must be deprived, as it were, of her only earthly support, and be left to journey alone! How would she bear this additional trial? But stern necessity had rendered it the path of duty, and he would hope for the best. Then again he was anxious touching the reception which he, a youthful stranger, should meet, and the measure of success he should realise, upon the crowded stage and amid the busy scenes of the metropolis of the world. With such thoughts Edwin was fully occupied as he made his way towards his future home. As evening began to cast her dark shadow over the face of nature, the old stage-coach which bore our young traveller turned into one of the leading thoroughfares of the great city, rattled along the crowded streets, and soon arrived at the "Belle Sauvage."

According to a previous arrangement, Edwin proceeded to the house of Mrs. G., a pious widow of great respectability, to whom he had a letter of introduction, and where he experienced much kindness and hospitality. Mrs. G. still carried on the business of her late husband, and being pleased with Edwin's appearance, manners, and testimonials, she arranged for him to remain in her establishment, and appointed him a post of duty.

Nothing could have been more to his mind, for he soon discovered that he had found a kind and considerate mistress, a comfortable home, and religious privileges, which his early training had prepared him to appreciate. Mrs. G., as we have already stated, was a Christian woman, and feeling the high responsibility of her station, she sought wisdom and grace to "walk within her house with a perfect heart," and to "command her household after her" in the fear of God. Hence all her domestic and business arrangements were formed upon Christian principles, and every facility was offered for the mental and moral improvement of her dependents, including the due observance of public worship, which she enforced by her

uniform example and affectionate advice. How fearful the condemnation of those who pay no attention to the religious cultivation and deathless interests of dependents whom Providence has placed under their care and influence!

Never did the leadings of Providence more manifestly appear than on the occasion of Edwin's engagement with Mrs. G. His occupation was most suitable, his companions most congenial, and the religious influences by which he was surrounded served greatly to animate and expand his thoughtful and inquiring mind. Under these favourable circumstances the ordniance of divine worship became increasingly his delight, insomuch, that his regular attendance and serious demeanour in the house of God was soon discovered by many, who rejoiced over him as a young man of considerable promise: and none felt more so than his excellent mistress, whose fervent desire and prayer was, that he might become a true disciple of that Saviour to whom, for many years, she had yielded the supreme homage of her heart, and the increasing devotion of her life. As time rolled on, the impression became general that Edwin ought to become a candidate for the fellowship of the church, and the necessary steps were taken with a view to that end. There was much generous sympathy among the Christian brethren with whom he had become associated; and who shall describe the sacred joy and triumph with which they hailed the day when their young friend should be recognised as a member of "*the church of the first-born!*" That day arrived; Edwin professed his faith in the Redeemer, and, amid the grateful praises of many sanctified hearts, received the right hand of Christian fellowship. How interesting the position of one who has just been added to the visible communion of saints! how important the choice he has made! how exalted the privileges realised! and how solemn the responsibilities incurred by him who, in the presence of "*chosen witnesses*," has been heard to say, "Thy vows are upon me, O God!" It is expected that such an one should "prove the sincerity of his love," and give some practical evidence of his faith. To such the church presents a wide sphere for sanctified effort, bringing into requisition the services, not only of him who has "*ten talents*," but of him also who has humbler pretensions, so that even "*the single talent*" may be "*well employed.*" And that law of love, given by the glorious Head of the Church for the regulation of her affairs, requires those who are *strong to bear with the weak, and not to despise the day of small things.*

"Every man, whatever be his condition and circumstances, is of some importance in society; and we should labour to impress our minds with this reflection—if great faculties were necessary, they would be more frequently bestowed. Situations calling for ten talents are rare—those which require five are more common—but those which demand only one are to be found every day."

Edwin had not been privileged with a liberal education, nor could he boast a brilliant intellect; still he had made the best use of his few advantages at the village school, had subsequently paid some attention to mental culture, and, possessing an average rate of natural ability, had progressed considerably in useful knowledge. Nor had he forgotten that earnest utterance of maternal piety which so impressed him on the morning of his departure—that solemn charge which enforced upon him the claims of the holy Bible—for he had devoted himself more especially to the study of the sacred Scriptures, and in so doing had availed himself of the help afforded in the works of some of the best divines. By these means he had obtained a tolerable acquaintance with the doctrines and evidences of the Christian religion, and was prepared for active service in the church with which he stood identified. In all this Edwin was greatly assisted and encouraged by his kind mistress and other influential friends, under whose fostering care the inexperienced country youth grew up into an intelligent and useful member of society.

Thus favoured by circumstances, and possessing an active mind, an affectionate disposition, and a pleasing address, Edwin speedily secured the confidence and esteem of a large and increasing circle. Having

been invited to become a Sunday school teacher, he gave himself to the work with much zeal and devotedness, and in a few years was regarded in the light of a model teacher—a faithful shepherd to the lambs of the flock. His punctuality was seldom at fault; for, although the school was quite a mile from his residence, the hour of duty, with very rare exceptions, found him in his place. Nothing but absolute necessity was allowed to prevent the exact fulfilment of his engagement. He would often say, "*How can an unpunctual teacher hope to succeed?*" His diligence, also, in preparing his lessons and in teaching them, was worthy the imitation of those engaged in this department of sacred effort. How well it would be if all Sunday school teachers were to give more earnest attention to the work of preparation! In this respect Edwin was "a workman that needed not be ashamed." He sought out useful ideas and acceptable words, that he might engage, instruct, and impress the minds of his youthful charge; while his uniform kindness towards them, and the touching manner in which he addressed them upon sacred themes, could not fail to produce the conviction that *their teacher was their friend.* The result of all this was, that the children under Edwin's care became distinguished for their regular attendance, their orderly behaviour, and encouraging progress. Here then is a lesson for all who are engaged in that interesting field of Christian labour. Let them give themselves wholly to their work, and prosecute it under the promptings of hallowed affection, and in the exercise of vigorous faith and untiring perseverance, and they shall see attentive and prosperous classes gathered around them as the fruit of their toil. There was yet another sphere of usefulness in which Edwin was engaged, and that was "the prayer meeting." For some years he was accustomed to unite with several other young men in holding such services on sabbath and other evenings, in some of the poor and destitute districts in the metropolis. These meetings have been of great benefit to those who, being without decent attire, have considered themselves unfit to mingle with the great congregation in the exercise of divine worship. To these humble services many of the most wretched, in their rags and dirt, have been induced to go, under cover of night, to hear Christian men read God's holy Word, and invoke the blessing of Heaven upon their souls; and how many have by this means been "*snatched as brands from the burning*," eternity alone will declare. The writer frequently accompanied Edwin on these errands of mercy, and can bear testimony to the acceptability of his unpretending labours.

Having a mind well informed upon Scriptural objects, a good voice, and ready utterance, his prayers were ever listened to with much interest; and the hearty welcome and kind attentions that awaited him at each place of meeting clearly proved that his visits were highly prized by those for whom he laboured. In addition to these more public duties, Edwin was ever ready, as occasion required, to reprove the thoughtless, comfort the distressed, and pour instruction into the inquiring mind. The writer has often been edified and refreshed by his judicious and pious remarks, and feels assured that many who enjoyed the privilege of his conversation had reason to say, "A word in season, how good is it! it is like apples of gold in pictures of silver."

(To be continued.)

TANKS AND SEA ANEMONES.

The aquarium, in its construction, admits of every variety of form, and of an equal diversity of material. Any vessel that will hold water may thus be converted into a marine or fresh-water vivarium. It however requires a little consideration before we make our election, because the less the denizens of the aquarium are disturbed, after once being placed within it, the more successful will be the result of the experiment.

A vivarium is in general formed, either for the purposes of science, or as a means of affording the beholder a pleasant and intellectual relaxation from more important occupations. It is to the latter class, as is due to the majority, that we propose to devote this paper.

Bell-glasses, similar in shape to those used by gardeners, but of a better

material, inverted, with the glass knob of the apex inserted into a wooden or earthenware stand, furnish a ready solution to any difficulty our readers may find, in places distant from the metropolis, in the selection of the vessel; for as yet the manufacture of tanks, properly so called, constructed exclusively for the study of this new branch of natural inquiry, is chiefly confined to London and its suburbs. These bell-glasses vary in height and diameter, so as to enable us to make such an arrangement of the most simple materials, that with a little observance of nature, and an eye for colour, we find ourselves imperceptibly possessed of artistical combinations, obtained by the sole outlay of a few shillings, and our own individual exertions, rivalling in beauty the greatest and most costly masterpieces of art. The diameter of these bell-glasses commences at two inches, and increasing inch by inch, till it reaches twenty, affords great scope for the display of taste and ingenuity in the arrangement of the vivarium. For fresh-water, full of active life, the larger sizes are best suited; but glasses of more than sixteen inches in diameter are liable to break at the curvature towards the apex, the thinnest part of the glass; and then, of course, as in larger floods, the destruction of surrounding property is the consequence. The more the glass resembles a bell, as it tapers towards the apex, the stronger it is, and it is therefore pleasing to add that it is the exact form required for displaying a mimic rock-pool to the best advantage. Those glasses which approach nearest to the form of a perfect cylinder do so at the expense of security, and the glass, where it should be strongest to bear the greatest pressure, is thinnest, caused by the greater expansion at the base, which is produced by moulding the blown bell-shape, and stretching it, when heated for the second time at the mouth of the furnace, to the form required. The only objection to the bell-glass is, that it exaggerates the size of the objects, and that the microscope cannot be applied with success to circular sides. Yet it has its advocates; and for the boudoir or drawing-room is preferred by many, as it is more easily moved from one position to another, not unfrequently occupying the centre of the table in the evening's reunion of the family circle, and promoting pleasing interchange of thought, or carried up into the sick-chamber of the absent invalid, shedding a soothing influence over the mind by the calm and holy contemplation it induces, and thus aiding the efforts of doctor and nurse to establish the patient in wonted health and strength.

Rectangular tanks next claim attention. At first these were made with wooden frames and base; but wood and water are not the best friends, and so they soon parted company, and zinc occupied wood's place for a time without opposition. For fresh-water zinc answers very well; but salt-water and zinc do not agree; and the zinc base gave place to slate in those intended for the marine vivarium. Then zinc is scarcely safe where the length of the sides exceeds two feet. It is liable to bulge out and cause the glass to break away from the frame; and hence many zinc tanks of even less dimensions are made with ugly and heavy top bars, which are only rendered more odious to good taste by japanning and gilding, after the pattern of a portable cash-box. Some makers use composition for the base. The owners of such tanks can only devote these to fresh-water, as the salt quickly corrodes the composition, rendering the sea-water at all times impure, and ending in the destruction of the base itself. For small fresh-water life, spiders, beetles, notonectæ, frogs, snails, or efts, and indeed for the observation of the change of larvæ—such as that graceful creature which turns to a gorgeous fly, or that monster known as the water tiger, the larva of the most voracious beetle—small zinc tanks are well adapted; but, where there is a choice, tanks with solid metal frames, either iron or brass, having a base of slate or marble, should be secured. Some of these are made with drawn or wrought iron, and others with cast metal or brass. To make a glazed tank, intended for salt-water, water-tight cement has to be used, which will withstand the action of salt-water. The glazing, too, is not performed in the

ordinary manner of window-glazing, but the glass is so fitted to the frame that it entirely covers the metal before the cement is applied, in order to prevent the water creating rust or decay. This cement, when hardened, will not allow the iron and glass to part company without a struggle. They are so firmly wedded as to defy Doctors' Commons and all laws of divorce, excepting the glazier's code. If then the iron frame is made to feel the pressure from without, and either to shrink or expand at the will of the atmosphere, the glass sides must do the same, or crack and break in the attempt; a fate which, in the early part of January, befel a large and beautiful plate-glass tank, already for upwards of two years in operation, and which we had seen full of native growth and life. Such a disaster cannot be repaired, and months of anxious study and observation are lost to the world of science. Drawn or wrought iron is subject to atmospheric influence, which does not affect cast iron or brass. We have no hesitation in saying that cast metal is infinitely preferable to all other substances for the frame-work of aquaria, and it is the only material which is free from the imperfections to which we have alluded.

Wood rots, zinc will not bear the action of salt-water, and beyond a very limited length is liable to bulge and give way, and wrought or drawn iron is subject to atmospheric pressure. Before we allude to other forms employed in the production of glazed aquaria, we must incidentally mention the recent introduction of solid glass tanks of rectangular form. At present they are far from perfect, and those we have seen are dreadfully out of square. To be sightly they should be cut; but as they are more objects of curiosity than of real use, we have only mentioned them as evidencing the existence of what eventually, when the first difficulties of the manufacture are overcome, may become elegant accessories to the furniture of the drawing-room. For the study, only such tanks are available as admit of the introduction of stained glass or opaque sides, because many beautiful plants and delicate zoöphytes, whose natural habitation is in deep water, will not bear exposure to strong daylight, without rapidly decaying and fading away.

Octagon tanks are much admired, and like the rectangular aquarium are made of solid metal, either drawn iron, or cast iron, or brass. This shape admits of the introduction of stained glass and opaque sides more readily than an oblong or square, because in the latter one side out of four must be sacrificed in one and the same length, whilst here the same degree of density is obtained by glazing one or more sides with stained glass to suit the emergency of the case, without destroying the pellucid hue of the water.

Elliptical tanks are made with bent glass, and those we have seen were of brass with marble base. Like the solid glass tank they are more curious than useful, though certainly, as articles of drawing-room furniture, they are elegant, and fit receptacles for a lady's pets.

At the risk of being considered tedious we have been thus diffuse respecting the aquarium itself, because it is important that only such vessels should be selected as, like Mrs. Primrose's silk gown, will bear the wear and tear of every-day use. "I love clear water, Jacob," said Mr. Turnbull. "How many hours have I, when a boy on board ship, hung over the gunwale of a boat, lowered down in a calm, and watched the little floating objects on the dark-blue unfathomable water beneath me—objects of all sizes, of all colours, and of all shapes—all of them beautiful, and to be admired; and yet of them not one perhaps in hundreds of millions ever meet the eye of man!" So wrote Captain Marryat in 1834, little dreaming that in less than a quarter of a century these beautiful forms would be almost as familiar to the eye of the most delicate lady in the land, as they had been to the rough weather-beaten sailor in that passing day. And what, then, are these floating objects of all sizes, of all colours, and of all shapes? Zoöphytes, plant-like animals, amongst which sea-anemones (animal flowers) hold the most prominent rank. Are they animals? Who has proved it? Who will venture to draw the line of demarcation which shall separate them from the vegetable kingdom? We know that they entrap their prey—we see them move from place to place; yet they

do not go in search of food as other animals do, but wait till it is brought to them, subsisting, like the flowers of the field, apparently without visible food, only upon the element in which Nature has placed them. This is the nice question which science has to solve; and though our own experience would lead us to say, with Mr. Rymer Jones, that "their animal nature is soon made evident," we are content to await the issue, which the verdict of the dissecting-knife alone can determine after many and repeated trials; for as yet all is chaos respecting their possession of animal functions, properly so called.

Is then the only use of the sea-anemone to gratify the eye and raise our curiosity? "You know, Jacob (we are again quoting Captain Marryat) that the North Seas are full of these animals—you cannot imagine the quantities of them; the sailors call them blubbers, because they are composed of a sort of transparent jelly; but the real name I am told is medusæ, that is the learned name. The whale feeds on them, and that is the reason why the whale is found where they are." But not only are they food for the whale, and thus contributory to the comforts of man in the second remove, but they are also eaten and relished by man himself, and the dianthus and gemmacea—the pink and the gem—the two most lovely of the species, says M. Dicquemare, are amongst the dainties of Spanish and Italian cookery, and boiled in sea-water present "a shivering texture somewhat like calf's-foot jelly, and the smell is somewhat like that of a warm crab or lobster." They are then eaten with savoury sauce. Mr. Gosse's method of cooking them is more simple. He fried some in butter, and, though hesitating and doubtful as to the first mouthful, like a young novice over his first dish of "*Grenouilles en fricasée de poulet*," or "*frittes en miranade*," when the action of swallowing somehow or other always becomes reversed in the throat, he soon overcame his scruples and ate them with relish. Mr. Kingsley, in *Two Years Ago*, gives, towards the close of the first volume, an interesting and clever sketch of a search after zoöphytes, from which we cannot do better than extract a remarkable passage, which he puts into the mouth of Thurnall, the scientific doctor of the tale. "This little zoöphyte lives by the same laws as you and I. He and the sea-weeds, and so forth, teach us doctors certain little rules concerning life and death, which you will have a chance soon of seeing at work on the most grand and poetical, and indeed altogether tragic scale. When the cholera comes here, as it will at its present pace before the end of the summer, then I shall have the zoöphytes rising up in judgment against me if I have not profited by a leaf out of their book."

The most hardy of these zoöphytes are the actiniæ, or radiated sea-anemones, more particularly the *mesembryanthemum* so called from its appearance being not unlike that of a fig-marigold, varying in colour through various shades of red, green, brown, and orange, and not unfrequently spotted with green or yellowish green, giving it the appearance, when closed, of a strawberry, from which that variety is known as the "strawberry anemone."

As a proof of the longevity of the actiniæ mesembryanthemum in captivity, Mr. Tugwell, in his Manual of Sea-anemones, records that Professor Fleming, of Edinburgh, has one now living, which was captured in 1828.

The *anguicomæ*, or serpent-haired, so called from the resemblance of their tentacles to the locks of Medusa, are more difficult to keep, because they require to be fed about twice a-week. With proper management they become quite hardy, and reward us for the care bestowed upon them by always looking more beautiful after they have been fed. The bellis, or sea-daisy, if once pleased with its new habitation, and the bill-of-fare provided tor its wants—bits of oyster, fish, or meat—is very hardy, and remains almost invariably open. The *gemmaceæ* (the gems) are more delicate; but if the water be bright, and the supply of plants oxygenate it sufficiently, they take kindly to their new home, and soon lose their first shyness, and become hardy. The *dianthus*, or pink, is difficult to please at first becoming a denizen of the vivarium, and must be left to select its own location. Once settled, it becomes as hardy as the others already named, and indeed these five varieties are the only actiniæ we recommend the novice to introduce into the

aquarium. Gradually the *anthea*, or sea-nettle, may be added, but it is difficult to manage, as are also the *crassicornes*, thick-horned anemones, and the *parasiticæ*, or parasites. Not so *madrepores*, corals, and *serpulæ*, tubular worms, which are hardy, and find plenty to subsist on in the water; and these two latter, with a *periwinkle* or two, to keep down confervæ and other vegetable overgrowth, are the only animals, besides the first five mentioned, we would recommend to the attention of a beginner, unless by way of variety a little more active life is desired, when the tiny *hermit crab*, the pagurus berahardus of naturalists, a small blue *Jersey muscle* or two, and *prawns*, or little *swimming fish*, may safely be added.

The base of the tank should be covered with sea-sand and shingle, and the imitation rock-work consist of boulders and pieces of hard stone, which have been kept for some time in salt-water. Upon these, according to taste, should be placed, attached to stones and growing, a few specimens of *ulva latissima*, or sea-lettuce, and of bright green *enteromorpha*. Beginners should introduce no other plants without first consulting a dealer, as marine plants, like land flowers, have their times and seasons, and those we have mentioned are attainable throughout the year. Carrageen moss, or *chondrus arispus* and *cladophora rupestris* and *arcta*, are also hardy weeds. The *rhodosperms* are all more or less difficult to manage. There is great variety of these; but as vegetable decay is quite as injurious as that of animal life to the inmates of the vivarium, we urge the beginner only to introduce such plants as experienced dealers will recommend.—*Family Herald.*

PROHIBITION COMPATIBLE WITH THE LIBERTY OF THE SUBJECT.

Of personal liberty we say nothing, because its full possession is incompatible with the existence of society. All government supposes the relinquishment of a portion of personal liberty. *Civil* liberty may, however, be fully enjoyed. It is enjoyed, where the principles of political truth and rectitude are applied in practice, because there the people are deprived of that portion only of liberty which it would be pernicious to themselves to possess. A degree of restraint may be necessary for the general welfare of one community, which would be wholly unnecessary in another. Yet the first would have no reason to complain of their want of civil liberty. The complaint, if any be made, should be of the evils which make the restraint necessary. The simple question is, whether any given degree of restraint is necessary, or not. If it is, though the restraint may be painful, the civil liberty of the community may be said to be complete. Every law implies restriction. To be destitute of laws is to be absolutely free; to multiply laws is to multiply restrictions, or, which is the same thing, to diminish liberty.

To prevent an evil is always better than to repair it; for which reason, if it be in the power of the legislator to diminish temptation or its influence, he will find that *this* is the most efficacious means of diminishing the offences and of increasing the happiness of a people. He, who vigilantly detects and punishes vicious men, does well; but he who prevents them from becoming vicious does better. "No consideration of emolument can be put in competition with the morals of a nation; and no minister can be justified, either on civil or religious grounds, in rendering the latter subservient to the former." Such a truth should be brought into practical operation. If it had been, lotteries in England had not been so long endured—if it were, the prodigious multitudes of public-houses would not be endured now. That these haunts and schools of vice are pernicious, no one doubts. Why is an excess of them permitted? *They increase the revenue.* "Emolument is put in competition with morals," and it prevails. Even on grounds of political economy, however, the evil is great—for they materially diminish the effective labour of the population. If to this we add the multitudes whom the idleness of drunkards throws upon the parishes, perhaps as much is really lost in wealth by this penny-wise policy, as is lost in virtue. Besides, all needless ale-house-keepers are dead-weights upon the national industry. They contribute as little to the wealth of the state as he who lives upon the funds.

"It would be no injustice," says Playfair, "if publicans were prevented from legal recovery for beer or spirits consumed in their houses; in the same manner that payment cannot be enforced of any person under twenty-one years of age, except for necessaries." This, however, were to attempt to cure one evil by another. It were a practical encouragement of continual fraud. The short and simple way is to refuse licenses, and to take care that those who have the power of licensing shall exercise it justly.

This sound proposition, that neither on "civil or religious grounds" is it right to consult policy at the expense of morals, is, as we have seen, at the basis of political truth. Here, then, let political truth be applied. It will be found by the far-seeing legislator, to be expedient as well as right.—*Popular Edition of Essays on the Principles of Morality, by J. Dymond.*

THE TISSUES OF THE HUMAN BODY.

(Concluded from page 300.)

The composition of the ultimate filament has been very carefully examined by many distinguished physiologists with microscopes of high magnifying power. Under some of these microscopes the filament appears to consist of a series of rounded particles or globules of the same size as the particles of the blood when deprived of their colouring matter, so that it looks like a string of pearls, each globule being commonly stated to be about the 2,000th part of an inch in diameter. But it is now pretty generally agreed that this globular appearance of the ultimate muscular fibre vanishes under the more improved microscopes of the present day, and, as viewed by the latter, appears as a peculiar pulpy substance arranged into threads of extreme minuteness, placed close and parallel to each other, intersected by a great number of delicate lines passing transversely across the muscular threads.

With the exception of the organs of sense, the muscular tissue is more abundantly supplied with arteries, veins, and nerves, than any other substance of the body. Every ultimate thread or filament appears to be provided with the ultimate branch of an artery, vein, and nerve. These vessels are seen ramifying on the surface of the delicate web of membrane that incloses the pulp, but cannot be traced into it.

The proximate principle of which the muscular pulp is composed is fibrin. From the pulp, when inclosed in its sheath of membrane, albumen, jelly, various salts, and a peculiar animal extract called osmazome, are also obtained; but these substances are probably derived from the membranous, not the muscular, matter. Fibrin contains a larger proportion of azote, the element peculiar to the animal body, and by the possession of which its chemical composition is distinguished from that of the vegetable, than any other animal substance.

Muscular tissue possesses a slight degree of cohesion, a high degree of flexibility and extensibility, but no degree of elasticity; for although muscle, considered as a compound of muscular substance and membrane, be highly elastic, yet this property is probably altogether owing to the membranous matter in which it is enveloped. Its peculiar and distinctive property is vital, not physical, and consists in the power diminishing its length, or of contracting or shortening itself on the application of a stimulus. This property, which is termed contractility, is the great, if not the sole source of motion in the body. Without doubt, elasticity and gravity, under the generating and controlling power of contractility, aid in accomplishing various kinds of motion. Thus membranes, tendons, ligaments, cartilages, and bones, by their physical and mechanical properties, modify, economise, facilitate, concentrate and direct the motive power generated by the pure muscular substance; but still the only real source of motion in the body is muscular tissue, and the only mode in which motion is generated is by contractility. This will be more fully understood hereafter.

The last primary tissue, termed the nervous, is equally distinct in nature and peculiar in property. It consists of a soft and pulpy matter, of a brownish-white colour. According to some, the nervous, like the muscular pulp, is composed of minute globules, arranged in the same

manner like a string of pearls; according to others, it consists of solid, elongated threads, of a cylindrical form, differing in thickness from that of a hair to the finest fibre of silk. The pulp, whatever its form of aggregation, is inclosed in a sheath of delicate cellular tissue. This external or containing membrane is called the neurilemma, or the nerve-coat; the internal or contained substance, the proper nervous matter, is termed the nerve-string. The nerve-string, enveloped in its nerve-coat, constitutes the nervous filament. As in the muscle, so in the nerve, many filaments unite to form a fibre, many fibres to form a fasciculus, and many fasciculi to form the large cord termed a nerve. Moreover, as in the muscle, so in the nerve, the filament, the fibre, the fasciculus, the nervous cord itself, are each enveloped in its own distinct sheath of cellular membrane; but the arrangement of the nervous fibres differs from that of the muscular in this, that though the nervous fibres are placed in juxtaposition, yet they do not, like the muscular, maintain through their entire course a parallel disposition, but cross and penetrate each other, so as to form an intimate interlacement.

The nervous pulp is at least as liberally supplied with blood-vessels as the muscular; the vessels are spread out upon the nerve-coat, in which they divide into innumerable branches of extreme minuteness, the distribution of which is so perfect, that there is not a particle of nervous matter which is not supplied both with an arterial and a venous vessel. Hence the neurilemma is not merely a sheath containing and protecting the nervous pulp, but it affords an extended mechanical surface for sustaining the arterial vessels, from which the pulp is probably secreted, and certainly nourished.

Albumen, in conjunction with a peculiar fatty matter, constitutes the chief proximate principles of which the nervous tissue is composed. To these are added a small proportion of the animal substance termed osmazome, a minute quantity of phosphorus, some salts, and a very large proportion of water; for out of one hundred parts of nervous substance, water constitutes as much as eighty. Its peculiar vital property is sensibility; and as all motion depends on the contractility of the muscular fibre, so all sensation depends on the sensibility of the nervous substance.

Such are the primary tissues, or the several kinds of organised matter, of which the body is composed; and from this account it is obvious that they consist of three only; namely, the concrete matter forming the basis of membrane, the pulpy matter forming the proper muscular substance, and the pulpy matter forming the proper nervous substance. Of these three kinds of animal matter the component parts of the body consist. In combining to form the different structures, these primary substances are intermixed and arranged in a great variety of modes; and from these combinations and arrangements results either an organ, a system, or an apparatus.

Economy.—Economy is one of three sisters, of whom the other or less reputable two are Avarice and Prodigality. She alone keeps the safe and straight path, while Avarice sneers at her as profuse, and Prodigality scorns her as penurious. To the poor she is indispensable; to those of moderate means she is found the representative of Wisdom; and although some moralist has said, that at the hearth of the opulent Economy takes the form of a vice, she is perhaps as great a virtue there as she is elsewhere. Her very name signifies the law or rule of a house, and her presence is as much required in the palace as in the cottage. The prince who despises her and outruns his means is at once a slave and a knave. The honest man who lives within his income, and owes no man anything, is your only true king. It is he alone who makes the golden discovery that Economy is the mother of Liberality—a relationship which Madame Geoffrin was wont to pleasantly acknowledge and totally disregard. Is it not Cicero who somewhere remarks that Economy is a princely income? Seneca, too, insists that this same Economy makes a poor man rich; but this sage was liable to stretch his maxims till they cracked, and we are not disposed to hold with him that Diogenes was wise when he put himself into an incapacity of losing anything. To us it has always appeared that the tub of the cynic was the worst ruled house of its day. Economy is an excellent virtue, no doubt, but, like all other virtues, it must be applied with prudence, or it will turn into a folly or a vice. In the olden time, there were sumptuary laws which, while they attached a penalty to extravagance, set a fine on the man who let a year pass by without asking a friend to dinner.—*Athenæum.*

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"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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THE *PSEUDO*-DR. BEACH AND HIS DIPLOMAS.

Some years ago a man came to this country, calling himself Dr. Beach, who professed to be the founder of a *Reformed* Medical College in New York. He promised to *reform* the *wrong systems* of medicine in this country, to enlighten the great mass of the people; and one would suppose, from his great pretensions, that he would perform a great work. As evidences of his capability to do all he promised, he exhibited medical works, which he claimed as his own productions, showing, also, a number of medals presented to him by the crowned heads of Europe (simply as an acknowledgment of their having *received his works*); and also, to confirm all, he brought a quantity of *diplomas*, issued, as they purport, from the said *Reformed Medical College*. With all these pretensions he duped a great number of individuals to purchase them at £3 each, inducing them to believe, that by the possession of this document they were entitled to attach to their names M.D.; and we have no doubt that some of those have thought that it really made them doctors, or gave them a *capability* to understand disease and administer to its relief. Now, we had never intended to again mention this man, or his doings, after our reply to his attack on us, in No. 101 of our Journal, and Dr. S. W. Hall's, of Troy, New York, letter, published in the same Journal; but as many people are, from time to time, deceived by appearances, and often injured by confiding in inefficient persons and means, it becomes our duty again to refer to him, in consequence of a trial which took place at Bury St. Edmunds.

The defendant Alfred Macham, claiming the protection of the law, &c., in consequence of his having the diploma of this Dr. Beach—we have no remarks to make respecting Mr. Macham, not personally knowing him, nor do we draw from the trial that he done anything *very* wrong, so far as the patient and his practice is concerned. But we disclaim all false pretensions, and state that *Alfred Macham is not a member of a Medical College of New York;* that the diplomas are a fiction; that Wooster Beach never founded a college called the Reform Medical College of New York. In fact, there is not, nor ever has been, a college of that description. In making the above exposition, we have no desire to injure any one; but, while in New York in 1854, we were introduced to Dr. Griscome, of East Broadway, the President of the College of Physicians of New York, when we referred to Beach and his diplomas, and that they were issued from the Reformed Medical College.

"Why," said Dr. Griscome, "I know Wooster Beach well; in fact, his son was a student with me until he died; that Wooster Beach never was the founder of a college; that he never had any authority to grant diplomas; and that what ideas he had (if they were his own) were many of them chimerical, and that he had no standing in New York as a physician, or any other place that he knew of." With the above facts to

advert to, as we remarked above, we do not wish to do harm to any one, but only to have every individual to stand or fall by his own merits and honesty.

24, *Montague-place, Russell-square, London, April 6th*, 1857.

OPIUM AND ITS VICTIMS.

This drug is largely imported into this country. It is very extensively used both in its crude and its liquid forms, by the allopaths, who resort to it in almost all cases of acute pain. It is admitted that it does act as a temporary anodyne in some instances; but it is invariably followed by a reaction which is not unfrequently insupportable. It is also employed as an excitant in cases of depression, though, like the dram-drinking of the drunkard, the dose is required to be increased in quantity, and to be more often repeated. In numberless instances, results have followed similar to those produced by habits of intoxication, such as a diminution of the natural heat, defective circulation, vitiated secretions, constant dejection, and ultimately *delirium tremens*. These effects have appeared in patients under the care and direction of allopathic doctors. Opium is not to be found in the materia medica of Medical Botany; but we have *scullcap* and *valerian*, which are administered with great efficacy to relieve the patient, without any injurious effects following.

The victims of opium are not restricted to those who take laudanum and opium under medical direction; a far greater number will be found among those who take it *ad libitum*. Some chew it, take it in pills, drink it in a fluid state, while others mix it with tobacco, or some other herb, and smoke it. The former are a very numerous class in this country, while the latter—the opium-smokers—are comparatively few. In some of the manufacturing districts the consumption of opium has lately increased to a most fearful extent. Druggists sell it nearly every hour the work-people leave the factory. It is slowly but most surely undermining the population in those parts, impairing the strength of the matured, bringing on them the infirmities which belong to old age, dwarfing the growth of the young and retarding their intellectual and physical development and hastening on a premature decay. Its action on the coats of the stomach, and particularly on the nervous membrane, diminishes the energy, retards the circulation and occasions an untold number of evils which soon become apparent in the complexion assuming a jaundiced hue, the limbs trembling, and the brain feeling wearied and unfit for any intellectual effort. The baneful results of this habit are not confined to this generation, but are, unhappily, entailed on the offspring of parents whose constitutions have fallen victims to this practice; and though some with whom we have conversed have freely confessed that they are injured by their use of opium, and point to its mischievous effects in the deformities and sufferings of their children, yet they have felt spell-bound by the habit they had formed, and *could not* leave it off. This mental inability, or terrific infatuation, is one of the most painful proofs of the injury done. The volition is prostrated under the tyranny of the habit, and the man is carried away by its impetus, as a twig on the stream. An incipient insanity is here apparent, and unless arrested by some powerful means, the poor victim either dies, or becomes a confirmed maniac of the most gloomy order. The noble and enterprising men, who have done much, and succeeded much, in putting down alcoholic drinks, would do well to turn their attention to the not less degrading, though more secret practice of opium-consumption, especially as it is carried on by large bodies of the working classes. We know one who was once in the habit of taking opium until he became alarmed at the hold the practice was gaining upon him, when with one bold determination he broke off the practice, and, immediately after, his health improved, he acquired strength, and has never since fallen into the snare. This brief reference to one case is intended to show that reformation is not impracticable.

However bad the effects of taking opium may appear in this country, they are nothing compared to the havock this practice is making among the Turks and the Chinese. In Turkey, opium is more destructive than either war or pestilence.

Men are mere shadows, and there are but very few comparatively of the children who ever reach the years of maturity. Among those who abstain from opium are to be found many strong and energetic men, with their healthy children, and these appear the better by contrast with their opium-consuming neighbours.

In reference to China we give the following extract from the pen of an eye-witness and resident in that country:—

The victims of this pernicious habit of smoking opium often apply for foreign medical aid at the different ports and to the missionaries, in order to abandon the seductive habit (which, when once formed, holds fast its victims in galling fetters), and to be set free from its slavish influence. Chinese charlatans and quacks are ever ready to take advantage of this state of things. I have seen large and conspicuous placards posted at prominent parts of the highways, professing to offer remedies for removing and breaking off the habit, and remedying its evils. I have thus seen the "English remedy," the "American remedy," and the "Russian remedy," thus very promptly advertised. Aromatic pills of tonic and astringent ingredients are the chief material, I believe, of these nostrums.

All missionaries in China are agreed that the evils of this system are among the greatest obstacles to the reception of their message by the Chinese, and of a closer and more friendly intercourse with that people. At the close of the last war with China, our merchants and manufacturers were rejoiced at the prospect of an increasing commerce with three hundred or four hundred millions of Chinese customers; yet, by statistical returns, we learn how grievously disappointed they have been, for as the illicit traffic in opium has increased, so legitimate commerce has diminished. The British people will doubtlessly inquire the reason of this. The solution of it is easy—for this illicit traffic in opium carries with it, like every other wrong course of action, its own punishment and consequences—and in this instance the disgrace of it is reflected upon the nation at large. The Chinese, it must be admitted, are the best judges of what is noxious and injurious to them, if they declare by their rulers and literati (as they have most prominently done in this instance) that any course of proceeding is injurious to them, we are bound, I apprehend, to accept their testimony, and are bound, as right-minded persons, more especially as professed Christians, to respect their wishes; as moral agents we violate the first principles of Christianity, to endeavour to force a noxious and prohibited drug, like opium, upon them, for the sake of gain.

Opium is, and always has been, a prohibited article in the Chinese tariff—that it is a powerful narcotic and poisonous in larger doses, and by its continued use, none will deny who know the properties of it.

Can, then, we ask, the introduction of so large a quantity as 87,000 chests annually prove otherwise than most detrimental to that people, leaving out of the account the guilt and immorality of an illicit trade? Interested parties may and will attempt to palliate the evils of the drug and traffic in it; but only those who have witnessed its evils, as I have done, can duly estimate them; but the British public can, in some degree, do this by placing plain facts before them. I have, for the last seven years, witnessed this sad traffic in China, and seen the effects of it upon its people, and do deeply grieve over them. The great number of opium-smokers, of the commoner class, resort to public places called kwangs, or opium dens, properly, where are provided the opium pipe-divans for reclining and attendance; prostitutes are often a part of such establishments. Here, in every part of their cities and towns, can be seen the debasing practice carried on—its immediate effects, and those of long habit—its early effects, and its more distinct ones. These places resemble more what Dante would depict hells upon earth. The effects of the practice when first taken in small quantities are most fascinating, exhilarating and exciting; its repetition very soon begins to tell upon the moral energies and powers, and its renewed effect is cravingly sought after, and thus a morbid excitement is kept up, which takes away the accustomed desire for food as the habit becomes formed. Its effects, physically,

soon become obvious by a peculiar swarthiness, dulness and obtuseness of sentiment, expression and habit. In those accustomed to its use, if withheld, there results a set of high nervous depressed feelings, somewhat like to those of *delirium tremens*. Hence the craving for more of the drug perpetuates its use, until the victim of it becomes lost in a great degree to the moral, social, and physical duties and relations of life; an incurable diarrhœa often sets in, in the advanced stages, and soon closes a useless existence; often the victims of it, after pawning the last remnants of their property, fall into the merciless hands of creditors and the obdurate mandarins. The Chinese artists well depict the evil results of this habit in their numerous pictorial illustrations of it.

The Chinese generally, as is well known, live in clans. Those of the same blood and kindred have a common home and establishment, mutually support, and are dependent on, one another. The males, of course, are the chief props and mainstay of the whole clan or community, just as we read of the patriarchal system in the Old Testament Scriptures. They feel, act, and sympathise with each other, and are often very numerous. Each member is bound to contribute his aid towards the welfare of the whole. The old men or elders are the governors, and responsible heads of the communities or clans, and are held accountable to society and to the authorities for the welfare and conduct of every member of the clan. This system thus supplies the place of a poor-law in China, and in this way China is governed in its vastness the more easily and effectually. Now, it is a fact, so far as has yet been ascertained, that opium-smoking in China is confined almost exclusively to the male population, the sinews, strength, labour, and capital of the people, on whom the females, children, and aged men are dependent for sustenance. Hence we cannot fail to perceive, that if the moral and physical energies of the males be undermined, how much misery must be directly entailed on their dependents, and how much the material and social welfare of the Chinese is involved in the practice of opium-smoking. I have myself had to discharge an excellent Chinese servant simply because he smoked opium; and I have known the British consul do the very same thing, because they could no longer be trusted. An agent of one of the principal English firms in China told me that he had discharged an old Chinese servant because he was an opium-smoker; remarking to me that servants become quite useless when they use opium.

It is a fact well known to medical men in China, how great an evil is this opium-smoking to the Chinese, and their record may be seen in the published works on China, in pamphlets and periodicals, especially in the *Chinese Repository*. The medical faculty in England know well that the use of this narcotic habitually destroys the procreative powers of the male. The Chinese themselves designate the drug as "black dirt," "black poison," "foreign poison," &c. All missionaries in China are agreed that the opium-traffic in China is the chief obstacle to the introduction of Christianity into that empire, and of a more friendly intercourse and commerce with that people. When they present Christianity to the Chinese, they are often met with such rebuffs as the following:—"How is it that you profess to give us a good religion while your countrymen are deluging us with a poisonous drug?" A literary man once was asked, what proportion of persons he supposed smoked opium. He replied, about eight-tenths. This may be true in cities and towns perhaps, not so in the country. On the whole, the more this system is investigated the more it is apparent that to the Chinese, politically, morally, socially, and religiously, it is an immense evil, and reflects most seriously on the British nation and its rulers.

THE MURRAIN OF FOREIGN CATTLE.

The importation of cattle to this country has been the means of keeping down the price of meat, and this, under ordinary circumstances, has been advantageous to the people in general, especially when cattle have been bought *lean* for the purpose of fattening before they are slaughtered. In most cases

the change of climate and pasture has proved beneficial to the cattle and a profitable speculation to the grazier. But there are few unmixed benefits. There always has been a danger of importing diseased cattle and of allowing the mischief to diffuse to some extent, both among British cattle and human beings, before the cause could be detected. Happily, however, the use of the telegraph has come to our aid, and corresponding agents from the shores of the Baltic and all parts of the continent, have, on the first outbreak of the murrain, conveyed the intelligence to England. The mischief has by this means been arrested by the prompt interposition of government, which has prohibited, at least for a time, anything and everything which might bring the infection to the quadrupeds of our meadows. The disease is of the most virulent character. It seizes the lungs of the animal and poisons the whole body.

Our insular position gives us greater chance of immunity, but does not free us from the necessity of taking some precautions.

The exclusion of cattle coming from Baltic ports will, no doubt, tend to raise in some degree the price of meat, but this evil is not for a moment to be balanced against the deliverance from the scourge of murrain within these islands. The importations from abroad, though they seem large in returns, form but a very small part of the supply necessary for the population. England and Ireland are pre-eminently grazing countries; the meat they produce is far superior to that of the Continent, and the quantity beyond all comparison greater than anything that the German ports can furnish. In fact, this country is, after all, mainly supplied by the produce of its own territory. It is, therefore, sound economy to take any steps which may tend to preserve our herds and flocks untainted. Temporary dearness of meat, of leather, or of tallow, is but a small evil compared with the introduction of a malady which may sweep off thousands of our cattle, from Hampshire to the Highlands, and perhaps, after ravaging the country for years together, end by permanently deteriorating the various breeds. In our damp climate, where a large supply of animal food is necessary for keeping up health and strength, the consequences of such a calamity as a general destruction of animals can hardly be contemplated without the deepest apprehension. No such event has happened in our own day, or even in the present age, but in former times such disasters were far from uncommon, and in the last century Europe was more than once swept by murrains which destroyed the animal food of entire nations. We think, therefore, the Government has only done its duty in prohibiting all importations from the infected districts.

But there is probably more to be done than merely to search Baltic traders for cattle or hides. This disease, no doubt, has its causes and its cure, like those of human kind. The words "infectious" and "contagious" are very loosely used. It is probable that this malady is propagated chiefly where the state of the animals is generally unhealthy, or where, through want of proper care, or through insufficient food or shelter, their physical condition is weak. We may further assume that a disease of this sort is epidemic, and likely to break out in more than one place, without any intercommunication. Both these considerations point to the necessity of increased care in the treatment of cattle at home. It is not impossible that the disease arises from natural causes, and cannot be averted solely by quarantine regulations. No doubt, infection from abroad would cause it to assume a still more deadly form, but yet the seed may be already sown among us, and favourable circumstances may cause it to take the dimensions of a great national calamity. Our agriculturists and breeders should therefore take their precautions in time. While government is watching the outports, they should do all that science can suggest to stop the progress of the disease, or remove the causes which may lead to its appearance. If the crowding of cattle-sheds and the want of ventilation and cleanliness have a tendency to encourage the epidemic, as certainly seems likely enough, no time should be lost in remedying defects which may be productive of such incalculable evil.

STATISTICS OF MEDICAL BOTANY.

The following is the first of a series of papers which we expect to receive and publish in accordance with our suggestions on this subject in several previous numbers:—

Name and Residence.	*Age.*	*Ailments.*	*Previous Medical Attendants.*	*When com. Botan. Treat.*
Mrs. Green, 13, Bath Street, Shadwell.	60	Dropsy, rheumatism, diseased liver, troublesome cough, and extreme nervous debility.	7 medical men, 3 of whom were M.D.'s.	September, 1856.

This lady's complaint had baffled the skill of the faculty for years. She was confined to her bed without hope of recovery. By the aid of botanic remedies (including sixteen lobelia emetics) relief was afforded in two weeks, and in two months she was convalescent, and enabled to attend to domestic duties. Her teeth and gums are destroyed by calomel. This lady attended Dr. COFFIN's Lecture on the North-American Indians.

Mrs. Rice, 86, Radcliff Highway, St. George's in the East.	40	Nervous system paralysed, inactive liver, constant sickness, rheumatic affections, and very distressing fistula.	Usual medical attendant.	December, 1856.

This patient was *ordered* to St. Thomas's Hospital by the medical attendant, as he said "her complaint was past his skill:" she could retain nothing on her stomach, and her friends had given her up. I was consulted by her husband without the *nurse's permission*, who immediately communicated with the doctor; he said she had a complication of diseases, and would never be cured. However, in two months she was again in her business, and, with the exception of debility, caused by the doctor's "strong medicines," is restored to good health. This lady attended Dr. COFFIN's Lecture on Nervous Diseases, and said the Doctor exactly described her case.

Mrs. Nichol, 2, Havering-street, Commercial-road East.	32	Acute inflammation of the bowels, kidneys, womb, &c., in fact of the whole of the extremities of the lower abdomen.	Usual medical attendant, an M.D.	January, 1857.

The intense agony suffered by this lady—worse, she said, "than the pangs of labour"—for five weeks, induced her to closely question her doctor: in reply, he advised her removal to the hospital. She now hopelessly yielded to the entreaties of a friend to send for Mr. Stephens, although she considered it "sheer nonsense" to do so. By the aid of vapour baths, lobelia emetics, powerful enemas, &c., Medical Botany triumphed, by affording substantial relief and refreshing sleep in less than forty-eight hours. Although ether and chloroform had been administered, she had no sleep for three weeks; the chloroform almost excited her to frenzy. Mr. Waters, Dr. COFFIN's able assistant, was consulted in this case. This lady also attended Dr. COFFIN's Lecture on Nervous Diseases, and said she could corroborate many of his statements on the erroneous treatment of the faculty.

Miss Dobson, 4, Hadden's-ct., King-st., Old Gravel-lane, St. George's East.	18	Gastric fever, inflammation of the stomach and great nervous prostration, with very distressing vomiting, cough and spasms.	Two medical men.	January, 1857.

This case was also considered hopeless. Her second medical attendant advised immediate removal to the Fever Hospital. This patient improved considerably the first fortnight, but experienced a relapse, and refused sustenance and medicine. At length, by steady perseverance, the difficulty was overcome. I attended her two and three times a day for a month. Treatment: emetics, nervines, &c. This case was known to the district missionary and lady visitors. Mr. Waters was consulted. Although still very weak from the severity of the attack, her strength is gradually returning.

Reference may be made to all these parties. JOHN STEPHENS.

We hope that many other agents will follow the good example which Mr. Stephens has set. A succession of reports from all parts of this country would be highly gratifying to the advocates of Medical Botany, and, at the same time, convincing to those who either persecute the system or have no confidence in it. We have repeatedly invited the attention of our readers to the necessity of having statistics of the practice of Medical Botany, and the veritable one now printed will form only a page of a large volume which in a short time might appear. A volume of the description contemplated would be a boon to society at large, as it would show, at one glance, the decided superiority of the treatment we adopt to that which is followed by the allopaths. It would also serve as a valuable testimony to the system, in the event of the government attempting to introduce any coercive measure to suppress or embarrass the practice of Medical Botany. Attempts of this kind have been made, and we have no guarantee that they will not be made again.—Ed.

ARTIFICIAL GASTRIC JUICE.

It has long been known, as matter of theory and experiment, to chemists and medical men, that it was possible to exhibit by artificial means some of the phenomena of digestion, and to dissolve portions of animal and other food in vessels maintained at a proper temperature, either by the gastric juice obtained from the stomach of an animal killed shortly after a meal, or by a similar substance artificially prepared. But this theoretical knowledge has not, until very recently, been turned to practical account, to any considerable extent, in the treatment of those numerous and distressing forms of bodily disease and infirmity which arise from impaired powers of digestion. Dr. Landerer of Athens was, we believe, the first person who employed in medical practice an artificial gastric juice, which he prepared from the stomach of a wolf; but even before that, rennet, a substance possessing somewhat similar properties, was occasionally used as the medicine in cases of dyspepsia. The systematic introduction, however, on a large scale, of a medicine capable of performing the functions which properly belong to the digestive organs, is due to Dr. Corvisart, a Parisian physician, and the results of its use appear sufficiently remarkable to merit general attention.

Food, it must be observed, as introduced into the stomach, is not in a condition to enter the blood and be converted into the organised tissues of the body. It requires to undergo the process of digestion—"that process," says Lehmann, "by virtue of which nutriment is transmitted, in accordance with chemical and physical laws, into the circulating system, for the renovation of those portions of the organs which have become effete;" the food being thereby, in the words of the same distinguished chemist, "reduced to a soluble state, or, generally speaking, to such a condition that it is capable of being absorbed into the mass of the juices of the animal body." Numerous experiments have been made, both as to the ingestibility of various kinds of food, and as to the exact character of the process. Among the best known are those of Gosse, who had the power of inducing vomiting in his own person at will, and could thus recover for examination portions of food which had been exposed for some time to the action of the gastric juice—those of Beaumont, who employed a man whose stomach was easily accessible through a remarkable gunshot wound—and those of Schultz, who worked upon dogs and cats, which he killed at various intervals after feeding. Very great discrepancies exist between the results arrived at by the different investigators; nor have the experiments with artificial gastric fistulæ been much more satisfactory, so far as regards the degrees of digestibility of different aliments. But it is established that the *modus operandi* by which the change resulting from digestion is effected is one of those mysterious processes classed by chemists under the designation of catalysis, in which a substance, by virtue of the presence of some other body or bodies not themselves affected by what is taking place, becomes converted into something of which the chemical composition is identical with the original substance, but which never-

theless possesses very distinct and peculiar physical properties. The food, in fact, to use a term of organic chemistry, is converted into an isomeric variety of what it originally was; and one of the physical properties which it acquires by the change is its capability of absorption and assimilation by the proper secretive organs of the stomach and intestines. Until it undergoes this change, it can neither be absorbed nor assimilated, and is consequently not only useless, but injurious and wholly incapable of supporting life.

The solution of food of all kinds in the stomach is effected by the agency of gastric juice, which is, essentially, a combination of a substance called *pepsin* (literally, the *cooking* principle), with an acid—probably lactic acid, the pungent and disagreeable acid which imparts its peculiar flavour to sour milk. Much discussion has taken place among chemists as to whether or not other acids, such as acetic, hydrochloric, and phosphoric, are present in the active natural juice; but it appears certain, at all events, that in *every* case, unless it be one of absolute disease, lactic acid is present in such quantity as to communicate to the gastric juice a decided acid reaction. It attacks iron filings, and decomposes carbonate of soda. It is also matter of discussion whether the lactic acid be a primary and original constituent of the gastric juice, or whether it is produced in a more circuitous manner, the pepsin being secreted in a neutral state, and then acting as a *ferment* upon the amylaceous substances of the food, and so generating the acid. Thus much is certain, that the property of so acting, by causing fermentation, is inherent in the neutral substance—*i. e.*, in pepsin without any lactic acid in composition with it—while pepsin in this neutral condition is destitute of digestive power. M. Boudault, of Paris, who alone has at present succeeded in preparing pepsin on a large scale, is of opinion that the secretion is neutral. The question is of consequence, for if it be so, the part played by the saliva in the whole machinery of digestion assumes additional importance, as we must then conclude that one of its constituents (diastase) is employed in the stomach to convert the starchy matter of the food into grape sugar; and this, in its turn, is converted by the pepsin into lactic acid, without the aid of which pepsin could not perform its appropriate functions.

Whatever be the precise reaction of pepsin, one fact is clear—it is the principal and indispensable element in producing the change involved in the operation of digestion. Remove the pepsin, and all the other secretions are powerless—acidulate slightly a solution which contains (according to Wasmann) but one sixty-thousandth part of pepsin, and in a few hours it will dissolve coagulated albumen. Hence if, in cases of impaired digestive power, pepsin can be introduced, even in very small quantities, into the stomach, at the time of taking food, the operations of nature will be wonderfully facilitated.

So long ago as 1834, it was proved by Eberle that the gastric juice retains its power after removal from the body; but it is an excessively nauseous fluid, and can only be obtained in any available quantities by the destruction of a great number of animals. It contains as much as 97 per cent. of water, about 1.75 of salts, and only 1.25 of pepsin; and if, therefore, the pepsin could be obtained distinct from these diluting elements, a great point would be gained, and its administration rendered comparatively easy. Experiments made by Schwann established the important fact that it is only the glandular structure of the stomach which contains a digestive fluid from which the pepsin may be precipitated; and this led to the preparation of pepsin in the manner now used by M. Boudault. A number of rennet bags—commonly used in making cheese, and which are the fourth stomachs of the ruminants—turned inside out, very gently washed, and the mucous membrane, which contains the follicles whereby the juice is secreted, scraped off. It is reduced to a pulp, steeped for twelve hours in cold distilled water, and acetate of lead (sugar of lead) added. This precipitates the pepsin; and the precipitate is treated with sulphuretted hydrogen, which separates the lead as sulphuret, and leaves the pepsin in solution. It is then filtered and evaporated to a syrup or even to a dry

powder, at a low heat; for it happens very curiously that, if exposed to a heat of more than 120° F., it loses all power of digestion. In either of these conditions, however, it is very liable to decomposition if exposed to air, is excessively deliquescent, and the taste and smell are repulsive, resembling those of bad broth. The syrupy solution is therefore mixed with starch, and the mixture carefully dried. It then forms a grey powder, like coarse flour, and by addition of starch or pepsin, as the case may require, can be brought to an uniform standard of strength; and it is then fit for medicinal use, either by itself or mixed with muriate of morphia, strychnia, salts of iron, or other reagents, which do not affect its digestive properties.

Thus prepared, pepsin can be taken with the greatest ease, either in water, or between slices of bread, or in any other simple manner, and, according to M. Boudault—from whose communication to the Imperial Academy of Medicine some of the foregoing facts have been taken—and to Dr. Ballard, who has introduced it into London practice, it is capable in every way of representing and replacing the normal gastric juice of the human body.. Some very curious instances are mentioned by Dr. Ballard, whose character and position render him a witness above suspicion, and whose cases are recorded in sufficient numbers to preclude the possibility of the results being attributable to any accidental circumstances. Perhaps the most remarkable case is that of a lady, sixty-six years of age, who for four years had suffered pain which she had "no words to describe," for three or four hours after every meal. The natural consequences were, excessive prostration and complete disgust for food; and she had for many weeks limited herself to four rusks and a little milk and beef-tea per diem. The first day pepsin was used, she ate, with ease and enjoyment, a mutton chop; though, on the day before, she had endured intense agony for no less than five hours after her ordinary meal. In a few days she ate pretty freely, and gradually improved, and at length was able to give up the pepsin entirely, to eat without pain, and walk some miles without fatigue. (Dr. Ballard, on *Artificial Digestion*, p. 30). The pepsin appears, from this and many other recorded cases, not only to act *per se* on the food, but to restore the lost activity of the secretive organs. The importance of such a result, and the value of the remedy, can only be appreciated by reference to the actual amount of the digestive secretions. According to Lehmann, the juices which flow into the intestinal canal during the twenty-four hours amount to full one-seventh of the whole weight of the body. A man who weighs ten stone will secrete in twenty-four hours about—

Saliva, 3lbs. 7oz. containing about ½oz. of solid matter.
Bile, 3lbs. 7oz.
Gastric juice, 13lbs. 12oz., containing about 6½oz. of solid matter.
Pancreatic juice, 7oz.
Intestinal juice, 7oz.

After reading this table, no elaborate argument is needed to prove that the consequences of serious derangement to the organs concerned in the production of so important a secretion as the gastric juice must be terrible; and yet no class of diseases is so common. Precious indeed would be a remedy which should enable medical science to cope successfully with any considerable proportion of such maladies.—*Saturday Review.*

LANGUAGE FOR HOME.

We are always delighted with well chosen and appropriate language in a public address. The orator's power lies much in the stirring music notes of the language he employs. He rings a thousand changes in words. If refined and elegant language is delightful in a public speaker, how much more so is it in private conversation, in the social circle, in the converse of friend with friend, of lover with lover, of companion with companion! It is in the private walks of life that the deepest, and strongest, and loveliest feelings of our nature are called into action. The relations of kindred, friends, and companions, in which are opened the heart's fountains of love and goodness, are, in their most delightful aspects and offices, concealed from the world. They are too tender

and sweet to bear the gaze of a rude world. Here it is that the power, beauty, and refinement of human language should be chiefly known and felt. Here it is that it should become the music notes of the most refined affection. Here it is that the euphony of its flute-like power should thrill along the nerves of those whom love has united in its harp-strings' bonds. The home circle should be held too sacred to be polluted with the vulgarities of language which could have originated nowhere but in low and grovelling minds. It should be dedicated to love and truth, to all that is tender in feeling and noble and pure in thought, to the holiest communion of soul with kindred soul. In order that such a communion may be fully enjoyed, it is requisite that language should there perform its most sacred office, even the office of transmitting unimpaired the most tender and sacred affections that glow in the human heart. *Home!* how sweet, how tender the word! How full of the associations that the heart loves! How deeply interwoven are the golden filaments of these associations with all the fibres of our affectionate natures, forming the glittering web of the heart's golden life! Here are father, mother, child, brother, sister, companions—all the heart loves, all that makes earth lovely, all that enriches the mind with faith and the soul with hope! What language is meet for home use, to bear the messages of home feelings, to be freighted with the diamond treasures of home hearts? Should it be any other than the most refined and pure—any other than that breathing the sacred chastity of affection? If the dialect of angels could be used on earth, its fittest place would be in the home circle. The dialect of home should be such as would not stain an angel's tongue, nor fall harshly on an angel's ear. It should be made up of the words of wisdom, which are at once the glory of youth and the honour of age. If the members of every home would use that language, and that only which the true home feeling inspires, and which should be used in filling the true offices of that only earthly prototype of heaven, how different would be the appearance of the world! Methinks we should then have no need of angel visitors to teach us the ways of love and joy, of peace and glory; for earth would have its own angels, and they would be scarcely inferior to those that dwell above.—*Rev. G. S. Weaver.*

TRUE SOURCE OF JUVENILE CRIMINALITY.

Juvenile delinquency and its most efficient remedy being at present more prominently before this country than any other, we extract the following from Mr. Livesey's seasonable tract, under the conviction, that it most conclusively establishes the point which we have so long maintained—that domestic misery and juvenile depravity are almost uniformly occasioned by strong drink.

"To detail the havock that drinking has made among the *working classes*—the masses of the people—would of itself require a volume. It is difficult to know where to begin. My heart almost bleeds to witness the sufferings of working families, to think that when the husband's earnings are sufficient to provide the necessaries, and some of the comforts of life, they are in abject misery, the wife a melancholy, heartbroken creature, the children famished, starved, neglected, untaught, uncared for, a prey to the vicious and criminal examples of the street.

It is deplorable to think that two thousand pounds are paid every week to the operatives of this town, which never finds its way to the homes of labour, but is carried direct to the public-houses. Is there any wonder at the poverty of the people, while such an amount, which should be spent upon food, clothing, bedding, furniture, and give a large amount of employment, is thrown away upon drink? and the lost time, injured health, property destroyed, crimes committed, which are the consequences, are truly appalling. Just see a specimen of drink's doings among the labouring class every day. Inquire into their domestic condition, and you find the man of 24s. a week almost without a chair to sit on, or a table to eat off. Upstairs there is a miserable bed of old straw or chaff, with some old pack sheets and not a single blanket, even at the most inclement season of the year. Everything is bought by littles, at the worst hand, and upon credit if

they can get it, and life is one course of scampering to meet one trouble by creating another.

Here is the true source of juvenile criminality; here is the first cause of the departure from virtue of many of the operatives' daughters; it is the idle, drinking habits of the father, and sometimes of the mother also; and yet we are making immense though fruitless efforts to reform the children, while we neglect the parents, thus reversing the order of Providence, who has constituted the parents the guardians of their own children.

"Could but all the misery and wretchedness inflicted on families—all the losses and embarrassments brought upon tradesmen—all the casualties, sickness, and self-murder, produced by one of these bar-parlours, be made tangible, in one accumulated mass, what an awful spectacle for the world to gaze upon! And yet the system is kept up. Pale-faced Death keeps reaping his harvest, and his victims drop into the grave and are forgotten."

"Who, indeed, does not feel the impossibility of succeeding in any branch of social amelioration, so long as the country is deluged with drink? so long as the lower classes are brutalised by its influence, and the efforts of the higher and middle are paralysed by drinking customs? For a while we may bear up; but without a Temperance Reformation this country cannot long maintain its stand."—*Bristol Temperance Herald.*

THE NURSERY AND THE NATION.

It is common with many to make light of the position of a domestic in a family, and to regard it as unimportant because it is subordinate. But this is a degree of mental blindness that verges almost on infatuation. Moral influences are not to be so measured. The nursery anticipates both the school and the church: it sows the first seed, and in that little home-world first comes into close contact with the child's moral and immortal nature. Looked at in its true light, what is the nursery but just the next age in its bud and blossom? An enlightened regard, therefore, for the highest good of our children, should make us deeply concerned for that of our domestics; for in contributing to their knowledge of God, we are helping to purify the moral atmosphere in which our whole household shall live and move, and laying deeper, by every such effort, the foundations of our domestic happiness; and through this, in our share, promoting the true prosperity and stability of the commonwealth. Most men sadly mistake on this subject. They look for the grand secret of national greatness to forms of civil government and to good laws. And no doubt these have their important influence. Or they expect much from the labours of associations and benevolent institutions. But all of these are insufficient, and some of them impotent, without the s lent operation of the domestic constitution, and many of them would be unnecessary, with all their ostentatious and expensive apparatus, were but the domestic constitution, which they so often cast into the shade, generally wrought for its highest ends.

"How small, of all that human hearts endure,
That part which laws or kings can cause or cure!"

It is in the thousand households of our land that the national character is formed, and in virtuous and religious homes that nations require their greatness. It has been justly said, "Families are the nurseries both for the state and for the Church, the springs which from their retirements send forth the tributary streams, which by their confluence make up the majestic flow of national greatness and prosperity."—*Dr. A. Thomson in "Family Life."*

VARIETIES.

How to Find Fault.—Find fault, when you must find fault, in private, if possible; and some time after the offence, rather than at the time. The blamed are less incl ned to re ist when they are blamed without witnesses. Both parties are calmer, and the accused party is struck with the forbearance of the accuser, who has seen the fault, and watched for a private and proper time for mentioning it.

Prevention of Pitting in Smallpox.—Mr. Startin, the senior surgeon to the Gurney Hospital for Diseases of the Skin, has communicated to the *Medical Times* a very important plan, which he has adopted during the last fourteen years, for preventing pitting in smallpox,

and which, he states, has always proved successful. The plan consists in applying the *acetum cantharidis* or any vesicating fluid, by means of a camel-hair brush, to the apex of each spot or pustule of the disease, on all the exposed surfaces of the body, until blistering is evidenced by the whiteness of the skin in the parts subjected to the application, when the fluid producing it is to be washed off with water or thin arrow-root gruel. The pain attending the application of the vesicating fluid is very slight and transient.

How to Find the Bodies of Drowned Persons.—The following extract of a letter from a friend in Herkimer County, New York, to a gentleman in Chicago, says the *Tribune*, may be worth publishing for practical purposes:—"One of Mr. Cain's little boys was drowned last week in our canal. They raked the canal, fired cannon over the water, all to no purpose. They did not succeed in finding the body till a young lady on a boat recommended them to take a loaf of bread, make a hole in it, put in some quicksilver and fasten it, and then put the bread on the water, and it would float until it came to the child. She said she had seen it operate with success. No one had faith, but they tried it, and sure enough the bread floated a few rods and then stopped. A boat came along and drove it from its place, but as soon as the boat passed the loaf returned to the same spot, and they took a hook and found the child in that place. He had been in the canal two days."

[The above-mentioned method of discovering bodies is referrible to natural and simple causes. As there are in all running streams deep holes formed by eddies, in which drowned bodies would be likely to be caught and retained, a loaf containing quicksilver as above described, or any other floating substance, would, when thrown into the current, be consequently drawn to that part of the surface over the centre of the eddy-hole.]

Roads, Ancient and Modern.—For centuries the highways of England were but quagmires, and almost impassable, yet the Roman roads of far older date may be seen at the present time—faced by boulder stones, or with such materials as could be readily found in the various localities—in a tolerably perfect state; and some of them are used at small cost of materials at the present day. During the Caffre war, which caused so much distress to our troops a few years back, when bands of men, called by us savages, set at defiance the British forces, the late Duke of Wellington was applied to for advice. This famous soldier gave it in a few syllables—"Make roads into the bush." This was the Roman method, which we were obliged in our new way to carry into effect in the Crimea. In connection with the London of bygone times, the Romans buried their dead outside the city: we have but just acknowledged the wisdom of this practice. It seems, from a consultation of the best authorities, that the streets of London, like the capital city of this great people, were set out, as far as practicable, at right angles. We have since then contrived twisted and tortuous roadways; and such slums and alleys have, in consequence, been originated, that but for the actual damage they cause, they would be curious and ridiculous. After the Great Fire, Sir Christopher Wren proposed to build the new city somewhat after the Roman fashion: where the Bank of England and the Royal Exchange now stand, he inscribed a circle for the Royal Exchange and other important public buildings, and designed that the new streets should branch in long straight lines, and the intervals be arranged in a similar manner: one of these main thoroughfares was Cheapside—a Roman causeway—raised above the waters and marshes towards the north. If this wise plan had been carried out, it is difficult to estimate the advantages which would have accrued. In a sanitary point of view the ventilation would have been quickened and drainage simplified. As a matter of policy its advantages can be appreciated by those who have to ferret into the crooked lanes and streets of Whitechapel and elsewhere. It is scarcely necessary to mention how advantageous Wren's or the Roman plan would have been for the convenience of the increased traffic. The Roman method has been carried out in the American cities; and all the improvements of the old parts of London at the present day are being carried out, at an enormous expense and inconvenience, on the plans which have formerly been propounded.—*The Builder.*

NOTICES.

Dr. Coffin may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. Coffin may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

Advice gratis, every morning, from ten to one o'clock, at the establishment, No. 134, High Holborn, nine doors from New Oxford-street, nearly opposite the London and Westminster Bank, Bloomsbury Branch.

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The real name and address of the writer of a letter must be given in confidence.

Post-office Orders and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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VACCINATION.

In consequence of several communications which have from time to time appeared in our Journal—some of them from the investigations of John Gibbs, Esq.—many of our friends have thought that we had changed our mind on the subject, or that we had contradicted our former statements. We therefore have thought it right to say again a few words on this subject. One of the great reasons that has led Mr. Gibbs to the investigation he has gone into was the Act of Parliament to compel parents and guardians to have all children vaccinated. This, on his part, and on the part of many of our friends, was laudable. We are as much opposed to any compulsory law as any one, and more particularly as, no doubt, much of the vaccine virus used by the medical men is contaminated with poisons that exist in the subject from which it is taken. We have said, in our "Treatise on Midwifery," page 149, that "the whole family of man has much reason to be grateful for such a valuable discovery; but the greatest benefits are generally followed by an amount of evil, for it has often happened that the virus which has been used has been taken from the arm of some subject whose system has been previously tainted or poisoned with scrofula, scurvy, erysipelas, or, what is equally bad, deleterious drugs; so that that which was intended to be a blessing has, in many instances, proved a bane, and many that have come under our own observation have thus been hurried to untimely graves, or had their constitutions impaired for the rest of their lives." We are of the same opinion now as when we penned the above in 1849. In all cases we must consider the aggregate of the good and the evil. To do so, we must inquire what desolating ravages were made by the small-pox before the introduction of vaccination; and although *our system* will in almost every case cure in a short period that disease, and in *all cases* rob it of most of its virulence and danger, yet our friends must not forget, that as yet comparatively few of the family of man understand or follow the system of Medical Botany. If our readers will take the trouble to compare the records of death by small-pox fifty or sixty years ago with Wednesday's *Times*, April 22, 1857, in which the Registrar-General says —"It is satisfactory to remark, that only one death from small-pox occurred in the week" in London, where there are nearly three millions of people. What has done all this? What has stopped the virulence of this disease all over the world? Why, the introduction of the vaccine matter; and it was for this, in anticipation, that the Parliament of England, in 1796, gave a donation to Jenner of twenty thousand pounds for his discovery, and the making it public. We would have our friends properly understand this matter as to what we mean. The virus, when taken properly from the cow and inserted in the blood of the child, will prevent the possibility of taking the smallpox, or, if taken from a *healthy* subject, will not do any harm or leave any taint in the blood; and some of our correspondents think we are in difficulties in speaking as strongly as we do in our writings against *poisons*,

and then recommending *poison*, as they say, from the cow!

We said above that the aggregate of good or evil was to be considered; and although the lobelia may make you sick —nay, very sick—for a time, yet if it prevents you from a *much longer* fit of sickness, or may be death, why we would prefer the lobelia. But at the same time we should not like to take it if we were sure it contained a portion of arsenic, and that the probability was that we should have a worse disease. Nor do we recommend contaminated matter to be used for vaccination, but would much rather risk the small-pox the natural way. As we have hinted in our "Treatise on Midwifery," as quoted above, many cases have come under our own observation. Whilst residing in the town of Hull in 1840, three children were vaccinated at the infirmary by the attendant doctor from one subject in one day. All healthy at the time, they *all* three came out over the whole surface with scurvy eruptions; two out of the three died, and about six months after we were called to attend the third, and by a long and strong treatment we saved the little sufferer. Now, it is the carelessness of the medical attendant that we complain of, and would rather (if we had any compulsory law at all) ask Parliament to pass a law to fine and imprison any medical man who would introduce vaccine matter that was impure. Our Journal has sometimes contained communications in our absence that held opinions that we did not strictly agree with; but we hold ourselves responsible for anything that is published in our standard works, *for those we have written ourselves*, and corrected the proofs of the printer. A correspondent from Bath complains that in one of our Journals in 1854 an article was inserted on the extraction of cancer, under the influence of mesmerism. We were at that time in America, and of course knew nothing of the affair until our return; and although the article spoken of was in our Journal, it was only quoted from one of the papers of the day, which should have been noticed. Our ideas on phrenology and mesmerism are just the same as they were at the time we wrote before, and our numerous readers may rest assured, that when we see cause to alter or change in any way our opinions, either on the pathology of disease or the remedial agents we have recommended in our various works, we shall make a *formal* and *responsible* announcement, and give our reasons and the evidences for the same. We have given a plain and simple explanation on every subject we have written, and feel that we have done too much good to at present make any change. We at the same time are willing that every one should enjoy their own opinions.

24, *Montague-place, Russell-square, London, April 25th.* 1857.

MAY AND ITS WILD FLOWERS.

THERE is no month in the year more favourable for the study of botany than May. The soft, balmy air, the sweet singing of birds, and the outbursting of vegetation, with its numberless beauties, invite the attention of the thoughtful to the investigation of plants and flowers as they are spontaneously unfolding their peculiar and distinctive charms. A few months ago, the botanic student was compelled to pursue his favourite subject in retirement, seeking a knowledge of the characteristics of plants and their properties as they are described in books or set forth in lectures; but now he can verify those descriptions he has read, and apply those principles he has learned, by obtaining real specimens as he rambles in the fields and lanes, by the bank of the river, or the edge of the pool. Rural scenes offer now great advantage as well as pleasure. Many of the wild plants of our native land possess medicinal virtues which alleviate the sufferings and cure the diseases peculiar to this climate. Those of our readers who are disposed to avail themselves of the opportunities this month affords for studying botany, may find the following hints to be very useful in assisting them to understand the plants and wild flowers of England.

One of the loveliest flowers of May, and one which adorns the hedges in greatest profusion, is the stitchwort (*stellaria holostea*). It is in most parts of England, a very common flower, and is the companion of the violet and primrose in the May copse and hedge.

It grows most plentifully on loamy soils. It was formerly called white-flowered grass, or all-bones, though it is one of the most delicate and tender plants in its structure. It is very brittle, and often said to have no root; but the fact is, that the stem is so frail, that on attempting to pull it up with the root, it separates itself just above the fibre, leaving that in the ground. The flower is white as the driven snow, and not much smaller than a primrose. Then the periwinkle *(vinca major)* lends its graces to the May hedge, throwing its bright blue flowers on bush or bramble, and its large, glossy leaves, glistening in the sun with so bright a green as to deserve its name of little laurel, by which it was formerly known.

Springing from out the crevices of the wall, and throwing its many leaves and blossoms over the gray ruin, the ivy-leaved toad-flax *(linaria cymbalaria)* is now very frequent. It may easily be described. Its blossoms are shaped like those of the snap-dragon, of a delicate lilac, marked with a small portion of yellow; and the leaves are thick and fleshy, and have their under surfaces coloured with a purplish crimson hue. It is often hung up in a flower-pot from the cottage ceiling, and the long stems hang down all round it. It sometimes, too, mingles with the house-leek and stone-crops which grow upon the cottage roof. The wall-pellitory *(parietaria officinalis)* is now in blossom on old castles, churches, and walls. It was formerly called *perdiceum*, because partridges are said to feed upon it; and the housewives of old times knew it by the name of *vitraria*, "because," says an old writer, "it serveth to scour glasses, pipkins, and such like."

Several very rough-leaved plants bloom during this month, and are much allied to each other, not only by their prickly foliage, but by their medicinal properties. The small bugloss *(anchusa arvensis)*, with its bright blue flowers, is not uncommon in corn-fields and on hedge-banks. Every hair, or bristle, on its leaves is seated on a white tubercle, and is very strong and sharp. The flowers of this plant are particularly attractive to bees, and the roots contain a great quantity of mucilage. With us, this flower is little used; but in China, where it is abundant, the roots form an important medicine. Another species *(anchusa tinctoria)* was formerly used for painting the face, by ladies who were not content with the beauty which God has given them; and it must have imparted a more permanent stain than the rouge of modern times. It is still cultivated in the south of France for its red dye, and is used by druggists for colouring various salves, and by vintners for adulterating port wine.

Most closely allied to this plant, though blooming some months later in the year, is the common borage *(borago officinalis)*, which grows on waste places, and on heaps of rubbish, and which bears beautiful blue flowers. It has been discovered by a chemist that a decoction of the leaves of this plant, evaporated to a syrup, and kept for some days, yields salt crystals, partly in form of needles, and partly cubical; and that the needle crystals were found to be perfect nitre, and the cubical ones sea salt. If a dried piece of this plant be held in a flame, it emits, while burning, a kind of coruscation, accompanied by a slight detonation. This is caused by the nitre which it contains, and which renders it suitable for match-paper, of which it is sometimes an ingredient. We see something of those small sparks in burning the dried stalks of lavender; and one of our wild reed plants—the great bur cat's-tail *(typha latifolia)*—will produce a flash of light if a candle be held near it.

The borage grows round about Aleppo in such profusion as to attract the attention of travellers; and its flowers are, in the East, larger and of a deeper blue than ours. This plant was once thought to strengthen the frame, and give courage and spirit to those who partook of it. The old English bowl, called a cool tankard, and made of cider, lemon-juice, and water, was considered to derive its refreshing powers from the borage-blossoms which were steeped in it; and as may easily be ascertained, they certainly possess the power of imparting coolness to liquid. Any part of the plant will also give its peculiar

flavour to water in which it is placed; though few, perhaps, would relish its strong taste. The leaves are very rough, but, when young, are sometimes eaten as salads; and were once highly esteemed as improving the flavour of cresses and chervil. Indeed the borage was, with the rue and rosemary, gathered not only for present use, but was stored by the prudent housewife against the season when the fresh plants were not to be procured; and, like the two former, was praised for that it kept "seeming and savour all the winter long." "Those of our time," says an old writer, "doe use the flowers in salads, to exhilarate and make the mind be glad. There be also many things made of them, used everywhere for the comfort of the heart, for the driving away of sorrow."

Another very rough-leaved plant, the comfrey *(symphytum officinale)*, is now in blossom, chiefly by the river-sides, or other moist grounds. It has clusters of yellowish-white, drooping bells, and the leaves are so rough that they cannot be touched by the naked hand with impunity. The root, which abounds in mucilage, is much valued by villagers, who use it as medicine. The lungwort *(pulmonaria officinalis)* is showing its purple bells with their young pink buds in the woods. The rough foliage is spotted like the animal lungs, and hence it was inferred that it was designed to be useful in pulmonary complaints. It was formerly called sage of Bethlehem, and spotted comfrey, and is known in France as *l'herbe aux poumons*.

On field-borders, commons, and other waste lands, the pea-shaped blossoms of the rest-harrow *(ononis arvensis)* are, by the end of the month, covering the spiny stems. This pea-like blossom is called by botanists, *papilionaceous*, or butterfly-shaped; and as it is always found that plants whose flowers are of this form, bear their seeds in a legume, or pod, they are also termed leguminous. The structure is remarked by Dr. Paley, as a beautiful instance of contrivance on the part of the great Creator of the universe. After having adverted to the importance of preserving from injury the parts of fructification in a plant, which are usually lodged in the centre of a blossom, he says, "The pea, or *papilionaceous* tribe, inclose these parts within a beautiful folding of the internal blossom, sometimes called, from its shape, the boat, or keel, itself also protected under a penthouse formed of the external petal. The structure is very artificial, and what adds to the value of it, though it may diminish the curiosity, very general. It has also this farther advantage, and it is an advantage strictly mechanical, that all the blossoms turn their backs to the wind whenever the gale blows strongly enough to endanger the delicate parts on which the seed depends. I have observed this a hundred times, in a field of peas in blossom. It is an aptitude which results from the figure of the flower, and as we have said, is strictly mechanical, as much so as the turning of a weatherboard, or tin cap, upon the top of a chimney."

The flowers of the rest-harrow are usually pink, but sometimes white, and the plant is usually very spiny, but the number of spines seems affected by the nature of the soil on which it grows. On calcareous soils these prickly appendages are few and small; while on the plants which flourish on a soil whose substratum is gravel, they are very strong and sharp.

On similar places to that on which the rest-harrow flourishes, the low juniper is often found. The common juniper *(juniperus communis)* now bears its bloom. In England, it grows on sandy, or chalky soils, or on open downs; but it is a plant common to the whole of Northern Europe, and, in some countries, is abundant on high mountains. In Sweden and Norway, it is applied to a variety of domestic purposes. In Norway —that land of good housewifery—the bowls of the dairy are daily washed with a decoction of the juniper branch, which is remarkably effectual in keeping them sweet. Then the Norwegian dame strews the young tops of the juniper over her floors, as our country people strew the sand on theirs; and the juniper is regularly sold in the streets for this use. When about to consign to the dust the remains of the dead, the juniper twigs are scattered plentifully from their houses to the church-yard, and a number of its green sprigs thrown on and around the

grave; and the twigs may be seen lying on many a tomb, still keeping their greenness long after they were strewn there by the hand of love and friendship. The Swedes make a conserve of the berries, and eat it in their meals: they also drink juniper beer, and take the plant medicinally. In Germany, the berries are used to flavour the *sauer kraut*, which is so unpalatable a dish to all but Germans; and in that land they are burned in sick-rooms and hospitals for the purpose of fumigation. In our country, they are chiefly used for giving the flavour to gin, and large quantities are imported from Holland, Germany, and Italy, for making this liquor. The juniper bush is, with us, low and small, seldom so large as the furze; but where it attains some size, the wood is very firm and compact. In former times, spits and drinking vessels were made of it, as it was thought to impart a pleasant flavour to meat or liquid. The sandarach, or pounce, which is used to strew over manuscripts, is made from a gum which oozes from the old juniper plants.

We read in the first book of Kings, xix, 4, that the prophet Elijah lay and slept "under a juniper tree;" but the word so translated is thought by recent commentators to be a species of broom. Three kinds of juniper, however, are said by Kitto, in the "Pictorial Palestine," to be common in the Holy Land. "On Mount Hor," on which Aaron died, says this writer, "and where his tomb is still honoured, it grows even to the summit; nor is it wanting in the renowned valley below, in which the metropolis of Seir is entombed." Many writers think that one species of juniper *(juniperus oxycedrus)*, rather than that of the so-called cedar of Lebanon, is the cedar wood so famed, in former times, for its durability, and of which statutes were made before the use of marble was introduced. The wood of our common juniper is said to burn so well, that a fire made of juniper boughs may, by constant replenishing, be kept burning for twelve months, without the addition of any other fuel.

Though our juniper grows low on the ground, yet some species of juniper attain, in other climates, the height of trees, and afford a welcome shade from the sun. Both Lady Sale and Lieutenant Eyre describe the refreshment which they experienced when they and their fellow-captives reposed under the shadow of the juniper arbours, during their melancholy imprisonment in Afghanistan; and the people of Syria often sit in groups around the trunk of the juniper, delighting in the shade of its green and fragrant boughs.

Under hedges, by the side of meadows, and in thickets, on high situations especially, the bitter vetch *(orobus tuberosus)*, is not uncommon. This has pea-shaped blossoms of a pinkish-purple colour, and marked with purple veins. The flowers are on long stalks, and the stem, which is about a foot high, has three or four pairs of leaflets. This flower is very common in Surrey. In the Highlands of Scotland it is also abundant, and is much valued by the Highlanders on account of its tuberous root, which has the flavour of liquorice, and is called by them cormeille. These roots they dry, and chew with their liquor, in order to improve its flavour. They also consider that a very small quantity of the cormeille will enable them to repel hunger and thirst for many hours. In some parts of Scotland, the roots are bruised and made into a fermented liquor. They are very nutritive, and have been used, when boiled, both in England and Scotland, as food in times of scarcity. In Holland and Flanders, they are commonly roasted as chestnuts, and have a very similar flavour to that of this fruit; yet in our country they are scarcely known to be of any value, and are quite neglected by villagers, though the flower is often gathered for the wild nosegay. It is known by the names of wood-pea and heath-pea, and, in Scotland, generally called by the name of knapperts.

During this month and the next, a number of vetches and vetchlings come into flower. They may be generally described as plants with butterfly-shaped blossoms, mostly of a purple or red colour, though a few of them have yellow flowers. They have slender leaves, and twining, or straggling stems, some of them with tendrils. The pretty

crimson vetchling, or grass-vetch *(lathyrus nissolia)*, with its slender, grass-like leaves, is in bloom this month, on the green borders of fields; and the spring vetch *(vicia sativa)*, is not unfrequent now on roads and pastures; but these are difficult to describe without the use of botanical terms.

Several species of vetch yield good herbage for cattle; and as they all have legumes, or pods, full of seeds, they afford food for birds. The vetches were formerly called fetches: thus in Milton's "Comus," the lines which now stand,

"If all the world
Should, in a fit of temperance, feed on pulse,"

stood originally, "feed on fetches."

The red pottage, for which the weary hunter, Esau, sold his birthright to his brother Jacob, was made of the seed of a species of vetch, or tare, the lentil *(ervum lens)*. The lentil is still highly prised in Eastern lands; and in Egypt, and throughout Syria, the bean is parched in frying-pans, and sold in shops. The mess of red pottage is still an esteemed dish, as it was when Esau coveted it, and sinned, by undervaluing his birthright, in order to procure it; and it is now, as it was then, a very important article of diet to the labouring classes, and often cooked, too, for the rich. Dr. Shaw relates, that "lentils dissolve easily, in boiling, into a mass, and form a pottage of a red or chocolate colour, much valued in Egypt and Western Asia." The yellow flowers of the plant called familiarly kidney vetch, or lady's finger *(anthyllis vulneraria)*, are blooming on dry pastures by the latter end of this month, and continue in bloom till August. These flowers grow in heads, or clusters, two clusters on each stem, and may be known from any other of our papilionaceous plants by the quantity of white silky wool in which they lie as in a nest. The flower, which, in Kent and most other counties, is always yellow, grows in Devonshire, and in Wales, with cream-coloured, white, or red blossoms. Linnæus observed of this plant, that in Œland, where the soil is a red calcerous clay, the flowers are red; but that on the white chalky soil of Gothland, they are white.

(To be continued.)

ASYLUM FOR DRUNKARDS.

The following communication from a highly respectable authority contains a suggestion which may deter some from the vice of drunkenness, and cure others who are already its victims:—

I have seen with great pleasure that our American brethren have given us another very useful hint: they propose to found an hospital for drunkards. A similar institution, with a somewhat softer designation, would be of immense value in this country.

Every medical practitioner knows how painful it is to witness that state of disease from drinking in which the reason is not entirely obscured, but in which every one is sure that the course persisted in by the unhappy and deranged drunkard must lead to the destruction of himself, and in very many instances, of all who may happen to be dependent upon him.

We may be told that asylums are in great abundance, and that every care will be taken of these poor wretches in such institutions; but whilst the law will not permit the confinement of drunkards, it may be truly said that no place of refuge exists, and that unless a proper house of recovery for the poor, infatuated, imbecile victims of drink be established, and recognised by the legislature, we shall still be tacitly allowing the widow and fatherless to multiply in our country. Why should not the Court of Chancery take charge of men who can be certified as unfit to manage their own affairs, and treat them as they would men who, from any other state of derangement, are unfit for everything but the destruction of their own souls and bodies, and the impoverishment of their own wives and children?

Every medical practitioner has felt how glad he should have been to have sent to a respectable asylum the man whom no attention, on his part, could save, and for whom no law has provided a rescue.

Surely such an institution would sanction an investment; and surely, too, there are men honest enough to found and manage it: it would also operate as a check, in many instances, to immoderate drinking—the mere knowledge that the law would sanction such measures of restraint as their peculiar cases might require.

STATISTICS OF MEDICAL BOTANY.

(*Continued from page* 318).

Name and Residence.	*Age.*	*Ailments.*	*Previous Medical Attendants.*	*When com. Botan. Treat.*
Mr. Munton, 51, Jubilee-place, Jubilee-st., Commercial-rd. East.	73	Carbuncle.	Two medical men.	

This very dangerous case had been sadly maltreated; notwithstanding the carbuncle was twice cut, and the medical men promised the patient relief each time, inflammation rapidly increased. The medical men said it was one of the worst kind of carbuncle. His great age, and the extensive and highly inflamed state of the back of the head and neck, rendered recovery extremely doubtful. By the aid, however, of Botanic Remedies, the malignant symptoms were subdued: to effect this, cayenne was largely used in the slippery elm poultices, with lobelia emetics, vapour-baths, &c. Mr. Munton, who was at one time, while under our treatment, entirely given up by his friends, attributes recovery to his teetotal principles, but believes that no other than the Botanic Treatment could have saved him. When asked by a friend if he would not take a little wine, to revive him, his reply was, "No! I believe in teetotalism, and if there is any truth in the principle, *now* is the time to try it." I attended him two and three times a day for two months. Dr. COFFIN and Mr. Waters visited him. Mr. Waters' skill in operating was of the highest order. Some of the faculty, Mr. M.'s acquaintances, occasionally called, I suppose from curiosity, to watch the case, and they all pronounced an unfavourable issue. During his convalescence, Mr. M. stated his own case at Dr. COFFIN's last lecture in the schoolroom, Ratcliff Highway—he had heard the Doctor's first two lectures before he was taken ill.

James Spells, 11, Globe-st., Wapping.	21	Pleurisy.	Declined the usual medical treatment.	November 12, 1356.

This patient was suffering from a very severe attack of pleurisy, which it will be well for the reader to bear in mind will *always* yield to similar treatment. In his case, two vapour-baths, two lobelia emetics, with yarrow and composition tea, cayenne and hot bricks, completely restored him in forty-eight hours. This young man's vigorous constitution, and *first* applying the Botanic Remedies, were the causes of his speedy restoration to health. Had he previously undergone the usual depletive treatment of the faculty, his recovery would doubtless have been as retarded as the preceding case, and those published in the last Journal.

Miss ——, assistant in a large silk mercery establishment at the West End.	26	Tic doloureux.	Objected to the usual medical treatment.	November, 1856.

This very severe case, for the patient was distracted with pain, and whose nervous system was in a highly disturbed state, obtained leave of absence from Saturday night to Monday morning; went to a friend's house, where I had sent the Botanic Remedies, similar to those for pleurisy, for the treatment is nearly the same, and returned to her situation at ten, A.M., on Monday, free from pain. After taking tonics and nervines about a fortnight, was restored to good health. This young lady's name and address would be given privately to any one honestly seeking information.

I will send you another paper next week: there is, I find, great reluctance on the part of many to have their cases published.

Reference may be made to these cases.

JOHN STEPHENS,
108, Ratcliff Highway.

RESULTS OF VACCINATION.

More Words on Vaccination. By John Gibbs, Esq. Being Appendices to his Letter to the Board of Health on Compulsory Vaccination. Willis and Sotheran. London.

This pamphlet is full of valuable information on the practice and results of vaccination. It proceeds on the great principles avowed and defended in the author's former work. The sacredness of human life, the cruel treatment of infants and others in injecting into the blood the virus of a diseased brute, and the infringement of Englishmen's liberty in arming lancet and lymph with the power of the law, are among the weighty objections adduced against compulsory vaccination. And these objections are well supported by evidence most satisfactorily showing, that vaccination has failed in producing the benefits its advocates promised, and that it has superinduced miseries and maladies which in all human probability would have been averted. Mr. Gibbs has not been restricted to a small sphere in the observations he has made, or in the illustrations he has selected. He has brought before the eye of the reader facts and statistics not merely from England, but from almost every part of the Continent of Europe. If our space would allow, we might give several extracts. We must confine ourselves to

APPENDIX F.

A recent French pamphlet, entitled, "*La Vaccination est non seulement inutile, mais dangereuse*," is a translation by Dr. Zimpfel of a German pamphlet by Dr. Lutze, with a preface by the translator. Here are translations of a few extracts. Dr. Zimpfel says:—

"Every practical physician whose conscientious efforts are directed, not to treat the maladies of his neighbours superficially, but to cure them radically (which can only be done by discovering the cause of the evil, as far as the fundamental laws of nature permit), is forced to confess, that, notwithstanding the immense progress of medical science in every country, the general infirmities increase more and more, in a dreadful manner, amongst all civilised people."—*Preface.*

Dr. Zimpfel attributes this deterioration of the human race principally to the practice of vaccination, and ranges himself without reserve on the side of Dr. Lutze, who says—

"Fifty years have passed since Edward Jenner employed cow-pox as an *anti-variolique*, and Woodville, Pearson, Odier, Decarro, and others taught, with unrelaxing zeal, to spread the discovery. Beneath our eyes there is a rich harvest of observations and experiences—rich, abundant, and for a long time examined sufficiently to permit the examiner to form a decisive judgment on a preservative which during all that time has been regarded as one of the conquests of science, so salutary, that unhappily the voices of clear-sighted observers were lost in the general jubilation. But science does not stop; she follows with serenity, but without rest, the path marked out by knowledge, and enlightens us at every step by progressive discoveries on the defects of hitherto vaunted acquisitions."—(p. 7.)

"Although inoculation with small-pox partly produced the desired effect, by diminishing the violence of the malady, the evil attending it was not less weighty, that is, the tendency of the persons inoculated to spread small-pox by contagion made itself not a little felt, so that, according to the tables of Pringle and Lettsom, there died of small-pox in London, during the 42 years subsequent to the introduction of inoculation, 24,549 children more than in the previous 42 years. Well, the magistrates of the city of Dijon ended by forbidding inoculation, under a penalty of 300 livres. At the same time a degeneration of the virus, and a transmission of other maladies, clearly showed that inoculation was as dangerous as useless.

"In 1775, Dr. Edward Jenner was struck with the experience of some peasants, that is, of persons who, having milked with wounded hands cows affected with cow-pox, were infected with this malady, but, on the other hand, were not afflicted with small-pox. He succeeded, with indefatigable zeal, in spreading this discovery far and wide, notwithstanding the repulsive idea to inoculate with the humour of a diseased brute. The seeming success raised a hope of the complete

extirpation of small-pox, so that at length, in some States, the law enforcing vaccination was passed, certainly in opposition to reason, by infringing the inviolability of the person and constitutional principles. Likewise, vaccination encountered, from the first, the most conflicting opinions."—(p. 8.)

"Dr. Schreiber says, in his work, *Gründe gegen die Allgem. Kuhpocken-impfung. Eschwege*, 1834, p. 15:—'In the ward of Schiffner, in the hospital at Vienna, I observed on the one individual cow-pox and small-pox; both appeared concurrently without being imparted by wilful contagion. The two exanthemata reciprocally modified each other in their course. I experienced a second case of this kind in 1833, in an infant, aged one year, who came to be vaccinated. At first, pustules formed in the incisions; a little later, small-pox supervened, covering all the body with small red spots. The pustules of the incisions progressed as usual, attaining their height on the eighth day, and then drying. The small-pox took eleven days before arriving at perfection, after which it dried. Five children at Oebisfelde, having been vaccinated on the 19th of June, 1801, took at once cow-pox and small-pox. Similar experiences occurred during the epidemic which prevailed at Marseilles in 1828. A vaccinated child lost an eye from confluent small-pox. In September in the same year, three children who were vaccinated died of small-pox; also in June, nine persons having the same disease had been vaccinated. In July, there were visible on three corpses the pustules of cow-pox besides those of small-pox."—(p. 9.)

"As to the diminution of the virulence of the malady, it is observed that all epidemics gradually diminish in violence as they re-appear at intervals, as the example of cholera shows. Considering also the influence of a heightened culture, and the redoubled and more extended care of physicians, we shall not at all find the results of vaccination satisfactory, as we shall see by and by. Although it is asserted that vaccinated persons seldom have small-pox, experience, based on conscientious observations, sufficiently shows the contrary."—(p. 10.)

"According to a letter of Swift, small-pox broke out in September, 1831, at the Port of Mahon, in the American frigate, the "Constellation;" 59 of the crew were seized with it, of whom 54 had been vaccinated. At Marseilles, in 1828, 40,000 persons took small-pox, of whom 30,000 had been vaccinated; 2,000 had also had the same disease. At Salon, a variolous epidemic prevailed, which attacked 200 vaccinated persons. At Digne, in 1827, 664 persons fell ill of small-pox, of whom 478 had been vaccinated. In the hospital of St. Jacob, at Leipsic, they observed, in 1832, 66 persons ill of small-pox, of whom 12 bore the distinct marks of vaccination; on 29 the marks were imperfect. According to Clarus, 500 persons were attacked by natural small-pox at Leipsic, of whom more than 200 had been vaccinated, and Dr. Schreiber, of Eschwege, treated in the same year 40, of whom the greater part had been vaccinated. During the epidemy which raged in Scotland in 1818, Thompson observed 484 individuals on whom small-pox manifested itself, although they had been vaccinated. As, according to these examples (of which we could cite many more), the anti-variolous virtue of vaccination is very doubtful, so the pretext has been refuted that small-pox is less violent after vaccination."—(p. 11.)

"The mortality also appears greater in the variolous epidemics observed of late. At Vienna (in Austria), 195 persons died in 1831. According to the reports of Clarus, 74 persons out of 500 died at Leipsic in 1832. During the epidemy at Copenhagen, 5 persons died of 46 vaccinated, so that, according to the estimate of Dr. Schreiber, given in his book, mentioned repeatedly (p. 37,) the mortality has remained at very nearly the same point since the employment of vaccination."—(p. 12.)

"Those who believe in the infallibility of vaccination pretend also that the exanthem which follows it, and answers to that of the natural small-pox, is essentially different therefrom. Attributing to vaccination a palliative influence on small-pox, they name that form of small-pox which they say is modified by vaccination, 'varioloid.' In return, a number of physicians believe that they have demonstrated the identity of varioloid

with small-pox. Neuberg, Sauter, and Robert, *observed cases of varioloid which had not been preceded by vaccination. According to Albert, the exanthem named varioloid has been noticed before vaccination.* This has been reported by Pittschaft, Schneider, Naumann, James, Franke, Vogel, Morton, and Van Swieten. Schoenlein also says:—'The epidemics in Italy and Holland, in 1547, were in the category of varioloids The numerous cases in which varioloids spring from the infection of small-pox, likewise in which small-pox shows itself by the infection of varioloid, manifest again very clearly the identity between these two maladies. It often happens that it is not possible to distinguish the varioloids, which follow vaccination, from small-pox, the which has been frequently observed by Radius, during the epidemic of 1832-3, at Leipsic. Dubois, Dugos, and many others, make the same observation.

"The frequent appearance of smallpox, likewise of varioloid, after vaccination, causes the presumption that the prophylactic virtue is limited to a certain space of time. Heim, Wagnes, Funk, Moehl, Rublack, and others, pronounce for re-vaccination after 10—15 years, although they remark varioloid and small-pox some weeks, and even some days, after vaccination. Schreiber, p. 16 of his book, quoted repeatedly, mentions nine children who, vaccinated on the 22nd July, took small-pox in August, September, and October; Neabes, Robert, Gregory, Plarus, and Radius mention similar cases. 'As there is not the lapse of a day, a week, a month, a year'. says Schreiber, A.D.O., 'that small-pox does not appear after vaccination, what period then should be fixed on for re-vaccination?' But even re-vaccination has shown its insufficiency. Without insisting that it often only half succeeds —of 80 re-vaccination performed by Robert, there were but two that perfectly succeeded—it should be mentioned that varioloids and small-pox have been seen to appear after successful re-vaccinations, as Albers, Edelmann, Locher, Clarus, and others attest."—(pp. 12, 13.)

"If, by these communications, we are satisfied that there is sufficient proof of the inutility and absolute uncertainty of vaccination, another question arises, namely, as regards the danger of the proceeding. Without regarding particular and local accidents, violent inflammations, ulcerations of the skin, ulcers, fever more or less ardent, after vaccination, Reil alleges that malignant cow-pox is accompanied by violent inflammations, fevers more or less violent, and ulcers difficult to cure."—(p. 13.)

"It should be mentioned, at the same time, that exanthematic cow-pox displays, in its diverse modifications, scurf, corroding scabs, erysipelateous inflammations, &c., noticed by Pearson, Sedfearn, Balhorn, Val. Müller, and Stromeyer. Hufeland, Reil, Jerandt, and others, make similar mention of this exanthem, and Jörg communicates several cases where it degenerates into furuncle, ending in death. Michaelis gives several cases of scurf and corroding scab. Schreiber gives many cases of metastases from this exanthem; inflammations of the eyes, affections of the glands and bones, of which even Schoenlein makes mention as the consequence of vaccination.

"That during dentition vaccination carries off many children is a fact proved beyond the least doubt, although they attempt to place it to the account of the teeth. The Court physician, Rublack, at Dresden, although a zealous partisan of vaccination, warns respecting this period. This important act, says he, should be allowed to pass tranquilly, unless variolous epidemics should cause every other consideration to be disregarded. *At this time it is greatly to be feared, lest, exacting too much activity from the system of lymphatic vessels by means of vaccination, and the disturbing consequences thereof, a vicious weakness be engendered of which scrofulous diseases are somewhat later the injurious consequences.* Also Schoenlein, as well as Aken, pronounce similarly, and, nevertheless, so many children are vaccinated at that period!

"Moreover, every year we have distinctly recognised that the vaccine lymph not only is the principle of contagion of simple cow-pox, but that it propagates dartres, scab, scrofula, s——s. Reil has had the same experience—'*The true cow-pox*,' says he, '*can never be transmitted*

to children who have bad blood, or who suffer from sporadic or herpetic eruptions, producing thereby an exanthem from which proceeds a lymph impregnated with those vicious humours. Schoenlein is likewise of opinion that by vaccination scrofula and s——s are transmitted to infants in good health.' At any rate, the superabundance of scrofula spread everywhere is partly due to vaccination ; for, according to the registries of deaths, scrofula carries off more victims than ever small-pox did. For example, at Berlin, in 1833, there was an average of 800 deaths per month, 75 being the prey of scrofula."—(pp. 14, 15.)

We cordially commend this pamphlet to the careful consideration of our readers and to the country at large. If its startling facts produce the result they ought, the people would give the legislature no rest until the offensive and un-English law of *compulsory* vaccination was repealed and for ever blotted from the Statute-book of England.

HOW SHALL WE DEAL WITH CRIME?

From what passed during the late session of Parliament, it is quite clear that the interest shown by the country at large on such subjects as the reformatory movement, prison discipline, transportation, and the ticket-of-leave system, has called into life, amongst our legislators, no ordinary amount of thought and talent. There is no more comprehensive question affecting the social interests of the body politic, than "How shall we deal with crime?" It embraces somewhat more than the mere matter of punishing crime—it involves the dealing with crime by preventive, by punitive, and by repressive measures; it must have earnest and solemn consideration, and Parliament must give heed, to prevent our young from falling into crime, to punish such as are entangled in its meshes, and to obviate its recurrence.

The solution of the above problem lies at the root of our social prosperity. Crime as a disease has apparently fixed itself on our country, and is gradually sapping our life and energies; and it becomes a grave question how far our system of dealing with our young has been such as befits an enlightened and prosperous nation. Whatever benefits may have accrued from the application of education, either it is defective, or it has failed to embrace within its influence those objects whom it is specially intended to benefit, or it has been nullified by the counteraction of more powerful evil influences. The country will not be satisfied, therefore, with any alterations which shall be simply confined to our dealing with crime; its moral and physical sources must be purified or removed. Our young must be so dealt with, as not merely to be trained to right, but to be removed, if needs be, from the sphere of evil influence, from the example of vicious parents, and criminal associations. There must be no morbid feeling of delicacy as to interfering with parental authority, and the liberty of the subject, so long as that authority and that liberty are abused. An Englishman's birthright is his freedom; but he must not abuse his liberty to the annoyance or injury of his fellow creatures. The sources of crime must be attacked vigorously; and foremost of them all, beyond controversy, stands intoxication. Now it is folly to shut our eyes to an evil because its removal is attended with difficulty—because large individual interests may be involved in it; it must be grappled with boldly, and, if possible, subdued. The question of £ *s. d.* must not be suffered to weigh against the general good. Crowded alleys, houses overflowing with filth, are bars to the development of all moral or chaste feeling; they may be productive to landlords, but if they be found to breed the pestilence of crime, there must be no hesitation in removing them. The frightful ruin in which habits of intoxication involve so many millions, the terrible amount of crime, misery, accidents, poverty, and desolation, which are clearly traceable to drunkenness, may be to public-houses, gin-palaces, and beer-shops, a source of almost untold gain; but the right of property should here sink into insignificance when placed side by side with the immortal souls, countless as the sand, which have been hurled into eternal ruin by their seductive influence. We speak strongly, because from ex-

perience, from being perpetually brought into contact with so much wretchedness and misery springing from this one cause alone, and from a sincere conviction that it will be sheer madness to attempt to deal effectually with crime, and stop its growth, while so many "authorised temptations to crime" beset weak nature on every side. Ere long this subject must be dealt with vigorously; for the gorgeous palaces, which disgrace rather than adorn our cities and towns, are too prolific a source of crime and poverty, with the consequent costliness of prisons and poor-rates, not to demand early attention from political and social economists, now that our wisest statesmen are puzzling their brains with the difficult but unavoidable subject of the punishment and disposal of our criminals.—*The Philanthropist.*

GOOD BYE, MY FATHER DEAR.

O, where is that lively voice
That made our hearts rejoice,
And those quick footsteps near?
O, we are so silent all,
Listening for thy footfall—
For thee, my father dear.

Art thou a far journey gone,
A-travelling all alone?
Without the storm is drear:
Thou'st fought the battle of life,
Struggled through its galling strife
Bravely, my father dear;

Then went to thy chamber rest,
As, guarded by angels blest,
We saw thee slumber there;
Stepping softly o'er the floor,
Loved ones watch'd thy breathing o'er—
Farewell, my father dear.

O, wilt thou not wake again,
Refresh'd by thy slumber then,
Our downcast hearts to cheer?
But more as we watch thee, more,
Thou wilt wake up never more—
Good bye, my father dear.

We miss thee in garden walk,
Miss thee in thy cheerful talk,
Miss thee everywhere;
Thy chatting by the fire bright,
Thy reading by candle light—
Thou'rt gone, my father dear.

Miss'd are thy spectacles' leer,
Miss'd is thy o'd snuff-box there,
And thy warm slippers here;
No, no more we hear thy tone—
Even its last echo's gone—
Good bye, my father dear.

But when they coffin'd out the light,
We could scarce believe our sight,
Choked by the bursting tear;
And when they lower'd the brave
Good old man into the grave—
Alas! good bye, my father dear.

* * * *

Still a soft voice whispers light—
Though he's gone out of sight,
Yet do not pine or fear,
For he breathes celestial breath;
Pass'd through terrestrial death,
Still lives our father dear—

Watching with an angel's eye,
Traversing the ether sky,
To wipe our sorrows' tear;
Waiting oft our footsteps nigh,
Till each other bids good bye,
And joins our father dear.

March 9th, 1857. S. Wilks.

Prolific Egyptian Wheat.—At one of the last meetings of the *Académie des Sciences*, at Paris, M. Guerin Meneville produced a number of wheat-halms of more than seven feet in height, each of them bearing several splendid ears. This fine species of wheat derives its origin from five grains that were found in an Egyptian tomb, and thus had for thousands of years been preserved from all external influence. Sown out in 1849, they grew up luxuriantly, and yielded a twelve-hundred-fold produce, in consequence of which M. Drouillard made various comparative experiments in Southern and Central France, as well as in Brittany. In 1850, these experiments were made on a large scale, and assumed a more important character. Since then they have been regularly continued, and the results have been officially confirmed. One half of a field was sown with the Egyptian, the other half with our common wheat; the former gave sixty-fold, the second a fifteen fold produce, while commonly a seven or eight-fold produce is considered a fair one. Sown out by single grains, the Egyptian wheat yielded a five-hundred-and-fifty-six-fold harvest. The experiments are now made in always increasing extension, and not less than 1,000 kilogrammes of "mummy-wheat" have been sown this year in the arrondissement of Morlaix. These remarkable facts, we should say, may furnish matter of speculation to the natural philosopher.

NOTICES TO CORRESPONDENTS.

G. N., Bradford.—We can recommend the section on botany, in "Orr's Circle of the Sciences," and a single number on the same subject in "Chambers's Information for the People." In almost every number of this Journal, in the last volume, we had an article on garden and wild flowers, and we have resumed that subject in this current number.

All letters should be addressed, "To the Editor of the Botanical Journal, 134, High Holborn."

The real name and address of the writer of a letter must be given in confidence.

Post-office Orders and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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SPRING-TIME, AND THE STUDY OF MEDICAL BOTANY.

No season of the year is more favourable for study than the spring. Now we have the cheerful light and lengthening days, without the depressing and relaxing effects of the summer's heat. Physical influences are all favourable to mental exertion. The vegetable world, in its abundant varieties and numerous developments, furnishes ample material for thought, investigation, and useful instruction. The brain is usually more vigorous, and better able to endure a greater amount of labour, in the spring, than at any other season of the year. The vital heat of the human frame is too much diminished by the winter cold, and too much evaporated by the summer's warmth in those seasons, to allow of much continued mental exertion; but in the spring the equilibrium of the caloric in the human constitution is very conducive to a great amount of mental application. While these remarks are appropriate to study in general, they acquire additional force in relation to the study of Medical Botany, arising from the great facilities which at this season are presented for obtaining various specimens of herbs and plants which contain more or less medicinal properties. In the meadows, the lanes, and hedge-rows of our native land, the student may find an ample materia medica. In some of the most simple and common wild flowers, there is much medicinal virtue. There is not, in all the wide range of spontaneous vegetation, one worthless or useless plant: cattle, when suffering from disease, select them, and take them with great advantage. These dumb creatures have, in many instances, been the instructors of man, and have taught lessons which it would have been well for our race if we had been found more docile and attentive pupils, to learn the instruction they have given. Upon no other subject or science is man so slow to learn, as the science of health. Horses, oxen and sheep, are often diseased, but few and infrequent are the cases of mortality among them, compared with the number which occur among the human species. Could cattle have free access to the medicine-chest of nature, fewer still would die; but too frequently death happens through the excess of human attention, and the prevention of the liberty of the brute, which would, if left to itself, obtain the medicine most suitable to relieve the malady from which it suffered. Man has mind and does not use it. The provision made to alleviate the sufferings and prolong the life of the inferior order of creatures, is not more ample than the provision made to relieve the ills and avert the death of the human race. The intelligence with which we are endowed, is exercised in other directions to promote the elegances and refinements of society. Why should it not be directed to the higher and more momentous consideration of promoting health?

Lindley's *Flora Medica* is full of valuable hints to assist every student of Medical Botany. The Apothecaries' Gardens, at Chelsea, contain the largest collection of medicinal plants to be found in any part of Europe; and though many

of these are indigenous in some counties in this country, the student derives the advantage in seeing any given plant there—of carefully examining its distinctive characteristics, and thus preparing to select it with certainty when he meets with it assoiated with thousands of others. These gardens should be visited again and again by all who wish to acquire eminence in this department of study. Also, Kew Gardens contain many rare and valuable and medicinal plants, which may be studied with great advantage. The public, in general, do not sufficiently appreciate this national auxiliary to the study of Botany, on the most extensive scale. Many who visit these gardens think only of the delight afforded to the eye, by the curious forms of some, and by the exquisite beauty or grandeur of other plants. The earnest student may, however, find facilities here which can be found nowhere else. At no season of the year does this place appear more deserving of attentive and thoughtful consideration than at the present, and the next few ensuing weeks.

But since the Chelsea and Kew Gardens are inaccessible to many of our readers, we advise them to give their attention to our *flora sylvestris* and *flora hortensis;* that is, to our account of wild flowers and garden flowers, which we have given in several numbers in this Journal. Though we do not pretend to say this account is either so full or complete as we could wish, yet the student, who avails himself of the information given in this and many other preceding numbers, will find great assistance in his endeavours to acquire a scientific knowledge of this interesting and most valuable branch of study.

At this season of the year also, there are numerous diseases which can be effectually cured only by medicines from the vegetable world. Dr. COFFIN'S "Guide to Health" will guide the enquirer in reference to the symptoms and the remedial treatment of the several diseases. Among those we may notice, by way of illustration, are the cutical or skin complaints which have long baffled the skill and defied the power of all the nostrums the allopaths are wont to prescribe. We have witnessed some very striking cases of recovery in relation to this class of disease, so that now, after a few doses, not only the skin has become clear and free from those blotches which used to appear as regularly as the season returned, but the cause of the disease now appears to be entirely eradicated. The diligent study of Medical Botany will amply repay the utmost diligence, care, and expense which can be bestowed upon it.

VACCINATION.

WE referred to Mr. Gibbs' valuable pamphlet in our last number. The following letter appeared in the "Morning Herald," and will be read with interest by most of our readers.

Sir,—After the lapse of more than a century, Jenner's discovery is again upon its trial. Its defenders continually shift their ground. Time seems to have vindicated the opposition of Goldson, Brown, Birch, and others. Objections, which at first met with unqualified denial, are now generally accepted, and palliated. Vaccination engages the thoughts and pens of deep, earnest, and independent thinkers, especially in France and Germany. Drs. De Lisle, Bayard, Ancelon, and Mons. Carnot, Drs. Nittinger, Gleich, Steinbacher, Klöber, Krüger, Eunemoser, Steudel, Schanfeln, Bez, Durr, Lutze, Zimpfel, Winter, Kranichfeld, Hamernick, &c., on the Continent; and, in England, Drs. Michell, Johnson, Pearse, &c., are examining the subject in various aspects in independent publications and in the "Revue Medicale Française et Etrangere," "Journal des Connaissances Medico-Chirurgicales," "l'Union Medicale," "Gazette des Hôpitaux," "Journal des Connaissances Medicales," "Die Gesundheitwächter," "Med. Corresp. Bl.," "Medicinische-brief," "Wiener Med. Wochenschrift," "Homœopathic Journal," &c.

In examining the pretensions of vaccination, one question prominently presents itself: How does the practice affect population? This question received but little attention from Jenner and his immediate disciples. They satisfied themselves with asserting, in an off-hand way, that, as small-pox yearly slew some 40,000 victims, vaccination would yearly preserve

that number of subjects to the state; but, ever since, they have neglected to shew that their prediction has been fulfilled, and we vainly enquire for that 40,000 and the natural increase thereof during half a century. Indeed, we were told by that vigorous vaccinator, the late Dr. George Gregory, that they are not to be found, having been disposed of by "the law of vicarious mortality"—that is, killed off by other causes. But thoughtful enquirers do not rest satisfied here; they ask—Is there not something more than the law of vicarious mortality at work? Does not vaccination itself re-act injuriously upon population? Does not the unnatural practice of puncturing healthy bodies and impregnating them with an animal poison produce effects prejudicial to health and longevity? This question, which has many branches, could never occur to the thoughtless and headlong; even now, it will not be entertained by those who cleave to authority, and who hate the trouble and responsibility of thinking; but it has ever presented itself, *in limine*, to every thoughtful mind uninfluenced by prejudice, self-interest, or vanity. Accordingly, it could not escape such a mind as that of Kant, and therefore we learn, without surprise, from de Quincey, that—"As to Jenner's discovery of vaccination . . . he (Kant) apprehended dangerous consequences from the absorption of a brutal miasma into the human blood, or at least into the lymph."

Is there no reason to admire the sagacity of Kant? French and German authors deplore the injurious influence of vaccination upon their respective countries. The proofs are too manifold to recapitulate here. I will only refer to an article published at Paris, in 1854, in the "Revue Medicale Française et Etrangere," and translated, in 1857, into German and printed at Stuttgart, under the title—"The Vaccine-poison at the Tribunal of Arithmetic," in which M. Carnot has advanced and proved this theorem:—

"In every locality where the population does not vary in a marked degree in consequence of immigration or emigration—in time of peace, under the operation of similar laws, all things being equal—when the fruits of marriage augment or diminish in a certain degree, it has been proved that the mortality of women, married and at the productive age, diminishes or augments in an inverse ratio."

Applying this theorem to a comparison of the mean condition of England at an interval of sixteen years, we arrive at the following results:—

Mean of the yearly fluctuation of population in England and Wales from 1821 *to* 1856 *inclusive.*

Periods compared	Mean years	Deaths	Births	Marriag.
From 1821 to 1840 (20 years)	1831	253,115	434,855	99,108
From 1836 to 1856 (18 years)	1847	383,406	559,400	139,078
Difference	16 yrs.	130,291	124,545	49,970

Excess of births over deaths:
- 1st period 181,740
- 2nd period..... 175,994

Deaths compared with 1,000 births,
- 1st period 582
- 2nd period 685

Births compared with 1,000 marriages:
- 1st period 439
- 2nd period 404

Diminution in the results of marriage in 16 years 35

Average diminution of ditto, 8 per 100.

General deductions.

The fruits of marriage have diminished in England at the rate of 8 per 100 in 16 years; that is, $\frac{1}{2}$ per 100 yearly. In France the diminution is double, or 1 per 100 yearly from 1831 to 1847.

Hence it results that the mortality of women at the productive age has increased in England, in 16 years, in the proportion of 92 to 100—that is 87 in the 1000; while in France the increase has been in the proportion of 84 to 100—that is 190 in the 1000.

In fine, the condition of England is less calamitous than that of France, in the proportion of 87 to 190, or nearly of 5 to 11.

Here it should be observed that, owing to the arbitrary measures of the French Government, the practice of vaccination in France has greatly exceeded, probably doubled, the practice in England.

Moreover, on comparing London with Paris, we readily observe that, while the

infant population suffers more, the adult population suffers less in England than in France, from small-pox.

England has, therefore, yet time to stop on the edge of the precipice to which the credulity of its men of science has led it, but from which the good sense of its people as yet recoils. As to France, after nine years of repeated warnings, after nine years' warfare with paralogisms and absurd hypotheses, scarcely less than a miracle can arrest her ruin.—I am, sir, your obedient servant, JOHN GIBBS.

Maze Hill Cottage, March 30, 1857.

STATISTICS OF MEDICAL BOTANY.

To the Editor of the Botanical Journal.

SIR,—In obedience to your suggestion in the last number of the Journal, I have taken the liberty to forward you a record of a few cases which have recently come before me. I have not found it possible to reduce them down to that shape and size of Mr. John Stevens, as I could not have described the cases as they ought to be in a medical journal, so as to make them intelligible to the public, who require to have cases placed before them so that they will discover their own by the description. I hope to be a frequent correspondent, in case you insert the enclosed; and this I am persuaded of—that both Medical Botany and the Journal will thrive better by the record of living cases. Believe me, sir, yours respectfully, G. CALDWELL.

April 24th, 1857.

A synopsis of a few cases lately cured at the Botanic Dispensary, Worcester-street, Birmingham.

It is most important to leaven the minds of the public with the statistics of cures performed by Medical Botany, so as to induce the public to give it a trial, and effectually to contradict that opinion entertained and circulated by the allopathic practitioners, that Medical Botany is powerless over the worst forms of disease. It is also most important to make our statesmen acquainted with our system, so that their minds may be prepared how to treat the attempts yearly made by the faculty to secure a monopoly for themselves in a system of medicine which, finding it insecure from its own proven inherent worthlessness, they may secure it behind an Act of Parliament. It is also most important to try and convince the faculty, and those who have charge of the manufacture of medical men, of the utility of Medical Botany, as for the sake of the public, whose health we have most sincerely at heart. We should like to proselytise by facts the allopathic practitioners.

Case 1st. One, with marked premonitory symptoms of consumption, cured in a fortnight. The patient, whose name was Griffiths, a young man about 22, a labourer, applied to us March 6th, 1857. Symptoms were harassing cough, keeping him awake the greater part of the night, difficult breathing, pain in the chest, loss of strength, flesh and appetite, night sweats, with occasional chills, sinking of the eyes, with marked cadaverous pallor around the eyes, nose and lips, symptomatic of wasting disease. The sounds of the chest, by percussion and auscultation, were ominous of internal inflammation of the structures of the lungs. The treatment we adopted consisted of expectorants (of which lobelia was the principal), tonics, and stimulants, internal and external, of which cayenne was the chief. This patient was able to return to his work, to the great joy of his aged parents, of whom he was the chief support, in about a fortnight. He had only three lots of medicine.

Case No. 2. Of extreme nervous debility, with symptoms of consumption. Miss S. Stourbridge, age about 25, called on us October 13th, 1856, to ask us "if we could do her any good." Her manner showed distrust, no doubt from her past experience of the inutility of medicines she had for years been accustomed to under the faculty. Her symptoms were about as follow: extreme weakness, short and hurried breathing, cough, weak feeling over the chest, pain and palpitation over the heart, a death-like pallor and cast of countenance, irregularity of the functions of the body, pain and giddiness of the head, coldness of the extremities, appetite poor, sleep restless and disturbed, sensations sometimes as if she must die from exhaustion. Her disease seemed to proceed directly from imperfectly organised blood, originating from deficient energy of the nervous system, whereby there was inability to appropriate sufficient nutri-

ment, and she was consequently dying from starvation, notwithstanding she had every luxury. Her case had proved quite unmanageable to some of the esteemed most eminent in Birmingham, and her friends regarded her case as one of hopeless consumption. We placed her on tonics and nervines, and stimulants, purely botanic, allowing no alcoholic beverages, which we find almost invariably to retard, and often prevent, recovery, and instead of China teas, we made her drink raspberry-leaf tea. This young lady has been restored now to sound and vigorous health, and she called on us the 17th April, and she said she never remembers to have been so well; she has now for several months been conducting her business, which is one requiring much energy. So much for the superiority of Medical Botany over allopathy, in one of the most hopeless cases!

No. 3. George Mason, West Bromwich, age about 40, called for advice March 20th, 1857, concerning a very severe and exhausting disease, characterised by the following symptoms: very severe pain across the bowels, so sharp, that putting his foot to the ground in the ordinary process of walking, caused him great suffering; after eating, pain much increased until ejected either by vomiting or by stool, to effect which he was in the habit of having daily recourse to castor oil as a purgative; appetite, scarcely any; great general debility, emaciation progressing, disturbed and unrefreshing sleep. He had been taking medicine from the allopaths from September, off and on, until the time he came to us, by the advice of a friend. Before coming he had on one occasion sent for his club doctor, whose name we have recorded, who, after examining him, ordered him "a bottle of stuff," which, after taking a small quantity, he became so alarmingly worse that he thought he was dying, and again sent for his doctor, who, when he came and heard the result of his medicine, ordered the man's wife to "take the bottle out of his sight as long as he was in the house." Ye who have confidence in the allopathic doctors and their remedies, mark this consistency in one who was what the people regarded an experienced practitioner. People of West Bromwich, we advise you to beware of the allopathic medicines, as we lately had a patient who fell a victim to licensed quackery. We gave tonics, stimulants and nervines, with Indian and No. 1 pills. The same evening after commencing our medicines, he was able to enjoy his tea with his family, which he had not done for months; pain and sickness from that day ceased, and in one week he was quite well, and continues so. The stimulant was composition.

No. 4. David Williams, West Bromwich, a case of nervous debility, accompanied with severe symptoms of indigestion. He applied to us Tuesday, March 31st, 1857. His symptoms were extreme debility, pain, confusion and giddiness of the head, pain over the bowels, pain across the loins, in the legs, and between the shoulders, restless sleep. After taking our medicine for about one day and a half, he called on his club doctor "to be told off," that he might return to his work. Seeing the change in the man's appearance for the better, he expressed surprise and asked what he had been doing, and innocently, poor fellow! thinking it was his medicines which had wrought the speedy change, he told him, "go on with your medicine," and gave him another bottle, *which he had carefully consigned to the slop bucket.* The allopathic doctors are not aware what boobies they appear in the estimation of a very large number of the intelligent community. This patient was able to return to his work on the third day from commencing our medicines, after he had been lingering and quacking with the allopathic empirics for a length of time, to no effect.

Case 5. A case of malignant sore throat cured in a few days. This has latterly proved a most intractable and fatal disease in Birmingham, under the allopathic practitioners, according to a statement made some time since, in a local journal. We were called to see this patient, of the name of Philips, near King's Norton, Birmingham, a child about seven years, March 14th, 1857. The mother said she had already buried two children from the same complaint. Under our treatment this child recovered in a few days.

We should advise the inhabitants of

Birmingham and the neighbourhood, when they are taken with malignant sore throat, or any other kind of malignancy in the shape of disease, to try the same system as M. Philips, and we have no doubt, with much happier results than they have been accustomed to under the allopaths, who are generally so very expensive, on account of entailing, in addition to their own, that of the undertakers' bills.

GEORGE CALDWELL,
M. R. C. S., &c.

We are glad to receive the foregoing statement of facts. Treatises, theories, and arguments, go for nothing, compared with the unmistakable detailed cases, illustrating the efficiency of the botanic treatment. Nothing is more calculated to popularise the system of Medical Botany, than a well digested register of its results, gathered from all parts of the country. We hope that ere long, other agents and advocates of the system will follow the example of Messrs. Stephens and Caldwell. Dr. COFFIN'S Journal ought to be replenished constantly with statements from those who practise his system, and thus its value to enquirers would be enhanced.—ED.

METROPOLITAN WATER.

THE General Board of Health has issued a Report, stating the results of the microscopical examination of samples of water obtained from the service-pipes of the Water Companies supplying water under the provisions of the Metropolis Water Act. The report is signed by Dr. Hassell.

The several waters were collected in Winchester quart bottles, by either Mr. Ransome or Mr. Cray, of the General Board of Health, with one or two exceptions, in the presence of Dr. Hassell. The following are some of the results:—

Grand Junction Company.—There subsided from this water, after it had stood at rest for a few hours, a small quantity of sediment, which consisted almost entirely of organic matter, dead and living. Among the living organic productions there were detected species belonging chiefly to the orders *infusoriæ*, *desmideæ*, *diatomaceæ*, and *fungi*. The animalcules or *infusoriæ* were rather numerous, and amongst them the following may be specified:—A *hydrachnida* or water mite, one or two examples of *anguinula fluviatilis*, the same of *rotifer vulgaris*, of *actinophrys sol*, of *coleps hirtus*, of a species of *euglena*, and of *vorticella*, besides *monades* and other animalcules not identified. Besides the above, there were *sporules* of animal and vegetable productions, *frustules* of *diatomaceæ* not identified, and a few threads of a *fungus*.

Southwark and Vauxhall Company.—This water was opalescent, and of a somewhat dirty appearance when collected; after standing for some time it became rather clearer, and deposited a considerable sediment, which consisted in part of earthy and in part of organic matter. The organic productions contained in it consisted of *infusoriæ*, *desmideæ*, *diatomaceæ*, and *fungi*. The living animal productions met with were not very numerous, but the following were observed:—One or two samples of *anguinula fluviatilis*, a few of *paramecium*, of *uvella*, of *michiatis*, of *euglena*, and of other genera and species unrecognised. The *diatomaceæ* were particularly abundant, and included many different genera and species, some hundreds of frustules being observed. This water was evidently in a very bad state, so much so, that either its filtration must have been defective or there must have been something wrong in the storage. The organic productions so abounded in it, that a whole volume might have been written, illustrative of their natural history.

Lambeth Company.—This water was also *opalescent*, and deposited very much sediment, but less than that of the Southwark and Vauxhall Company. The organic productions noticed were abundant, and corresponded for the most part with those of the waters of the Southwark and Vauxhall Company; in addition, examples of *anguinula fluviatilis* and of *gomphonema curvatum* were also detected.

Chelsea Company.—This water was clear and bright, and did not deposit any sediment that was visible to the naked eye. It contained rather many *infusoriæ*

belonging to the genera *euglena*, *michiatis* especially, and *laganella;* but scarcely any *diatomaceæ*, two or three frustules only being seen. Many green moving *sporules*, as well as a few brown ones, were observed, and also the threads of two species of *fungus*.

West Middlesex Company.—This water was quite clear, and deposited only a minute quantity of sediment, which contained but few *infusoriæ*, or *diatomaceæ;* amongst the former one example of *anguinula fluviatilis* was observed, and amongst the latter, frustules of *fragitaria capucina*, of *meloseira varians*, and of *synedra ulna*, also one or two of *nitzschia parvula*. It therefore appears that the waters of the Chelsea, and particularly the West Middlesex Company, contained comparatively few organic productions.

Hampstead Company.—This water was somewhat opalescent, and deposited rather much sediment, formed partly of organic and partly of inorganic matters, and which abounded in living organic productions, animal and vegetable. One or two examples of a species of *rotifer* belonging to the genus *brachoinus* were noticed, and which were also present in the water of this company on the occasion of its being examined in the autumn of 1854. Many brown and green moving *sporules* and threads of *fungus* were likewise detected.

East London Company.—This water was quite clear when collected, and did not deposit any sediment visible to the naked eye. Examined with the microscope, there were found in it both *infusoriæ* and *diatomaceæ*, but not in large numbers. Amongst the *infusoriæ* detected were examples of *actinophrys sol*, of *paramecium*, of *uvella*, as well as several minute animalcules, and two or three green moving *sporules*. Amongst the *diatomaceæ* noticed were frustules of *fragilaria capucina*, of two species of *gomphonema*, of two or three species of *avicula*, of *synedra*, *ulna*, of *pleurosigma*, of *cymbella*, of *nitzschia sigmoidea*, &c.

New River Company.—This water when collected was slightly dull and opalescent, and after standing for some time, a small quantity of deposit subsided. This consisted of dead organic debris, of animalcules, or *infusoriæ*, of *desmideæ*, of *diatomaceæ*, and of *fungi*.

Kent Company.—No sediment visible to the naked eye was deposited from this water; there were detected in it, however, a good number of *infusoria*, including several examples of *anguinula fluviatilis*, of a species of *rotifer*, of *paramecium*, of *amphileptus*, of *euglena*, besides which green and brown moving and stationary *sporules* were noticed. It was remarkable for its freedom from *diatomaceæ*.

Conclusions.—That the waters supplied by the nine Metropolitan Water Companies under the new Act for the improvement of the water supply of the metropolis, still contain considerable numbers of living vegetable and animal productions belonging to different orders, genera and species. That these living organic productions were found to be particularly abundant in the waters supplied by the Southwark and Vauxhall, the Lambeth, the New River, and the Hampstead Companies. That they were rather numerous in the waters of the Grand Junction Company. That they were much less abundant in the waters of the Chelsea, West Middlesex, East London, and Kent Companies. That those waters which contained most organic productions were cloudy and opalescent, as the waters of the Southwark and Vauxhall, the Lambeth, the New River, and the Hampstead Companies. That the waters which contained fewer organic productions were clear and bright, as those of the Chelsea, the West Middlesex, the Grand Junction, the East London, and the Kent Companies. It follows that the metropolis is still supplied with water containing considerable numbers of living vegetable and animal productions, and which are not present in the purer waters, as, for example, that supplied by the Plumstead, Woolwich, and Charlton Company.

GARDEN FLOWERS OF MAY.

May and the three following months, are the season at which the different species of the evening primrose tribe make their appearance. Only the yellow and white kinds truly deserve the familiar name, but these seem to give welcome to a cloudy day, or to the evening twilight, by opening just at the period when other flowers are closing. The common evening primrose (*œnothera*

biennis) expands its pale yellow flowers at about six o'clock in the evening. It was termed by Parkinson the primrose of Virginia, and is now often called evening star. Its roots are eaten in the same way as olives, and make wine more agreeable, thereby adding drunkenness to thirst. In many countries the plant is cultivated for these roots, which are boiled and eaten at table. The great flowered species *(œnothera grandiflora)* is delightfully fragrant. It was introduced into England from America, by Dr. John Fothergill, and has also pale yellow blossoms.

The evening primroses are annual, biennial, or perennial plants, and there is a great variety of them in common culture. The purple-flowered kinds, still called by gardeners *œnothera*, are by botanists now termed *godetia*: some of them are showy, tall plants, the handsomest of which are the annuals, introduced from California. Their colours are most brilliant when grown in a poor soil.

And now the garden bower is covered not only with numerous sprays of green leaves, but odours from the sweet-scented clematis invite us to linger near it, though as yet the sun is scarcely so warm as to make the shade valuable. The commonest and most fragrant garden species, is that called the sweet-scented virgin's bower *(clematis flammula)*, which is very similar in the appearance of its flowers to the wild traveller's joy of our woods. This plant is remarkably acrid in its nature, and indeed some portion of acridity exists in every species of the genus. Millar says of this, that if a leaf be gathered on a hot day, and after being bruised, be put to the nostrils, it has the scent of a flame, and will produce in the person who smells it the sensation of having been scorched. The bruised leaves applied to the skin will also raise a blister on its surface. The large-flowered species *(clematis florida)*, with white flowers, is commonly admired; and the more hardy *clematis azurea*, with beautiful violet-blue flowers, though well fitted to bear the open air, is still often found ornamenting the conservatory. Some of the common species are of a dark, dull purple; others bright blue or white; while the evergreen virgin's bower *(clematis cirrhosa)*, which is a native of Spain, has green flowers, which bloom very early in the year, and a few have yellow blossoms. The common japan corchorus *(Kerria Japonica)*, which is still very generally called by gardeners corchorus Japonicus, is a good flower, either for the shrubbery or garden, because it is seldom quite out of bloom; but if the winter be mild, it has here and there a flower on its branches, even to the season least favourable to vegetable beauty. Its yellow stars are now in great profusion on the weak, straggling branches which reach over the sunny wall. They are composed of rays, and round, like dandelions or marigolds, but of a darker and less brilliant colour, and the long, notched, and deeply-veined pale green leaves grow thinly over the weak boughs. This plant is sometimes upright, being merely fastened to a stick; but it is much better adapted for covering the garden or house wall. It grows wild in Japan, and was named after Ker, the botanical collector, who, some years since, introduced into our gardens several plants from China.

Some very pretty flowers of the ranunculus genus are blooming on the border. There is the common bachelor's button *(ranunculus acris flore pleno)*, with its double yellow flowers, which are to be seen in every garden, and which is merely a variety, rendered double by cultivation, of our wild flower, the acrid crowfoot of the meadows. There are also the pretty double blossoms of the white-flowered bachelor's button *(ranunculus aconitifolius)*, a long-standing ornament of the British parterre, but which in its native haunts, the high mountains of Switzerland, rears its snowy flowers, and varies the monotonous tints of ice and snow with its dark green leaves. This flower is often called fair maid of France, and it has been said it was so named by our gardeners, because the French emigrants who were in this country during the revolution were very fond of the plant.

Some of the tall and showy asphodels are conspicuous flowers in May and June. This flower is commonly called king's spear or king's rod; the French term it, *verge de Jacob*, or *baton royal*. The most ornamental species are the yellow

asphodel *(asphodelus luteus)*, which grows wild in the fields of Sicily, and now blossoms in our gardens; and the upright asphodel *(asphodelus albus)*, also blooming now with its spike of white flowers, and which is also common in the south of Europe. St. Pierre quotes a touching inscription from an ancient tomb, around which the hand of affection had planted the favourite flowers: "Without, I am surrounded with mallow and asphodel; within, I am but a corpse:" and the corpse to the ancients was but the name of a decayed and withered remains of what was once lovely, and not, as with us, the seed of the more glorious resurrection body which is sown in hope.

The yellow flower of the perennial Adonis *(Adonis vernalis)* deserves a place in any garden. It begins to bloom as early as March, and is still bright. It is a wild flower in many parts of the continent of Europe, and especially abundant on the countries on the shores of the Mediterranean, and it is of very easy culture. The dark crimson flowers of the flos Adonis, or pheasant's eye *(Adonis autumnalis)*, are equally hardy. This last species is generally known in France by the name of *goutte de sang*, and is the flower fabled by ancient poets to have sprung from the blood of Adonis, which, according to their legends, had a wonderful faculty of giving a red tinge to natural objects, and was said to have coloured the river of Lebanon, called Adonis, whose waters are red from the soil over which it flows.

Common as the humblest flower of our garden ground, is the columbine *(aquilegia vulgaris)*, which sometimes grows also in our native woods, and wears its hues of blue or pink, or purple or white, at this pleasant season. In the wild state it is generally blue, and is called by country people, blue starry. Our fathers fancied that the lion was fond of it, and hence its old name of *herba leonis*. The double-flowered variety is almost as general as the single flower. The prettiest of the garden species is the Alpine columbine, which also nods its head to the winds as they rush through the valleys of the high Swiss mountains. It has blue flowers tipped with yellowish-green, and is, probably, but a variety of the common columbine.

A syrup is sometimes made for children of the flowers of the columbine, but it has been denounced by Linnæus as highly dangerous; and he even asserts it to have proved fatal to children. This plant was called culverwort by old writers.

The pæony is now bursting forth into conspicuous beauty, with its red, rose-like flowers. The double red variety of the common pæony *(pæonia officinalis)* is that most frequently cultivated; but the double white and the delicate blush-coloured, are by no means rare, and one variety, the rose-scented, is sweetly fragrant. The common species grows wild in China and Siberia, as well as in various parts of Europe, and is said to be very beautiful on Mount Ida. The handsome flower called the Chinese tree-pæony *(pæonia moutan)*, the flowers of which expand during this month, and are, in the different varieties, of various tints, is sufficiently hardy to bear the open air of our winters. The most beautiful variety of the flower is the single poppy-flowered tree-pæony, which has large white petals with a dark purple mark at the base. From its coming out of the ground so early in the year, this plant is liable to be injured by frosts, and, therefore, requires to be planted in a sheltered part of the garden, where it is not much exposed to the morning sun. The tree-pæony is a cherished flower in China, and is said to have been cultivated in the Chinese gardens for fourteen hundred years. It is believed to have been brought originally from some of the mountains of that empire. A few years since is was so choice a flower in this country, that the price of a plant was six guineas; but it is now to be procured at a small expense.

The more slender species of pæony *(pæonia edulis)*, is much used by the Mongolian Tartars as food. These people boil the roots in their broth, and grind the seeds to a powder, which they mix with their tea.

And now, if we wander through green lanes white with hawthorn clusters, we find them fragrant with the odours of the honeysuckle. In the garden also,

> "The creeping honeysuckle weaves
> Its yellow horns and verdant leaves."

Our common kind *(caprifolium perycl ymenum)* is also called woodbine; and this is one of its oldest English names. Milton calls it, too, by our common name:

> "I sate my down to watch upon a bank
> With ivy canopied, and interwoven
> And flaunting honeysuckle."

But besides that our lovely wilding flower is often cherished in the garden, we have here several other species. One of the most general is the Italian honeysuckle *(caprifolium Italicum)*, which throws its long branches luxuriantly over the hedges of southern Europe, and a variety of which, called by gardeners the red honeysuckle, is very beautiful.

Another very handsome and common garden species is the trumpet honeysuckle *(caprifolium sempervirens)*, which, though it equals, or perhaps exceeds in beauty, any other of the common kinds, yet wants their fragrance. This elegant shrub is a native of North America, and flowers very freely with us from this month until August. The sweet and pretty plant called Chinese honeysuckle, and the gold and silver honeysuckles, are much more tender. They are natives of China, and are among the many flowers on which the Japanese bestow so much regard. The bark of most of the species is very astringent, and that of one kind is used in China for dying black.

The French term the honeysuckle *maire sauvage*. Its old English names were suckling and caprifoly; and with the Germans this climber is so great a favourite, that they have bestowed upon it at least a dozen familiar names. *Caprifolium* is a poetic word used for it by old botanists, because the leaf, or rather stem, climbs over the high places where the goat fears not to tread. It must be confessed that this origin is rather remote; but the word *chevrefeuille* (goat-leaf), by which the peasantry of France often call the plant, has the same origin.

And now those handsome plants, the rose bay or rhododendrons, come into blossom, and deck both garden and shrubbery with their handsome flowers and hard, evergreen leaves. Numerous kinds blossom during this and the coming month; but by far the greater number are varieties of the common species *(rhododendron Ponticum)*, which is found wild on the coasts of the Black Sea, from the range of Caucasus through Armenia and Georgia to the Western parts of Persia. This species grows in moist woods, but not on high mountains, and is said to be that which, by the nectar in its flowers, poisoned the honey of Asia Minor, though some writers ascribe this rather to a species of azalea. Another hardy species, the *Catawba rhododendron*, is very abundant in America. Some species of rose bay are described to be as abundant as the furze of our native island, growing in clumps on the grassy plain or hill, and, with their purple flowers, gladdening many a dreary and lonely place. Then we have several very pretty dwarf species, hardly more than a foot high. Two of these, the rusty-leaved rose bay *(Rhododendron ferrugineum)*, and the hairy kind *(Rhododendron hirsutum)*, with rose-coloured flowers, abound on the high mountains of Switzerland; and Dr. Gilly records the beauty of the rhododendrons in the interesting valleys of Piedmont. In Dauphiné they are very luxuriant and beautiful; and near the lofty summits of the magnificent Alps, they bloom in profusion, and are the highest woody plants of these regions, terminating all vegetation but that of lowliest herbs and mosses. To them the mountain herdsman is often indebted for his only fuel, and their branches crackle on the hearth of the solitary *châlet*. The lofty trees gradually diminish or dwindle near the heights of the mountains. They will grow in the valleys below, but cannot bear the snow-storm and bleak hurricanes, which leave these plants uninjured. And on the hills of some of these Alps, the lonely Piedmontese, as he gathers them for his fire, or sits by its light, ponders on the days when his fathers were rolled over the craggy heights, to join the "noble army of martyrs," because their enlightened spirits forbade them to join in idol-worship. The white hares of the mountains, whose coats were given them of the snowy colour to help them to elude the pursuer, often feed on the hard bark of these plants, when the severe weather has covered up the green things of lower growth; but the leaves

and branches are thought to be poisonous to animals in general.

Though a large number of the rhododendrons are American plants, in the warm regions of Asia they are also often found in great beauty, with crimson, purple, white, or rose-coloured flowers. The Daurian species *(rhododrendron Dauricum)*, is almost peculiar to the subalpine tracts of eastern Asia, and is common in the pine woods. One of the most beautiful plants in the British conservatory is the Nepaul species *(rhododendron arboreum)*, which is sometimes twenty feet high, with large bunches of flowers, of a dark crimson or scarlet hue, and the blossoms are so full of liquid honey, that when the tree is shaken, it falls down in showers. This species has large leaves, with glossy under surface, as white as silver, and has a variety with white, wax-like flowers. The name of rhododendron, taken from the Greek, signifies rose and tree; and the French term it *la rosage.*

And now, when the clouds seem literally "to drop fatness," and the "little hills and pastures to rejoice on every side," how sweet are the odours from the flower-bed on which the gentle pattering of the rain-drops has just been heard! Now it comes breathing from the hawthorn, or the lilac, or more powerfully from the honeysuckle, or the clustering flowers of the syringa *(philadelphus coronarius)*. This plant is often called mock orange, not only from its blossoms, so similar to the orange-flower which the English bride selects as the fitting ornament to the wedding attire, but because its odour, though far more powerful, resembles that of this blossom. The leaves have both the scent and flavour of the cucumber. Cowper admired its flowers among others of this month.

"Laburnum rich,
In streaming gold, syringa, ivory pure."

This plant is of easy culture and very general, but its native place of growth is unknown. It has been found in Italy, apparently wild, in some uncultured lands, but not so far from the villa, with its luxuriant garden, as to enable the botanist to pronounce it indigenous to the soil. A different species has been discovered on the Himalayan mountains, growing at the height of six or seven hundred feet, and it is thought very probable that our common syringa may exist still further to the north-west, and that it may be one of those plants which, some centuries since, were introduced from Persia, into the gardens of Italy and the other countries of southern Europe.

(To be continued.)

CORRESPONDENCE.

My dear brother Coffin,—I almost began to think you had forgotten to send me the work you promised in your last letter (having then just got it complete for delivery), when Mr. Partridge walked into the shop, and he said he had a book for me from Dr. Coffin; that he had kept it some time, not having been to Troy since he returned, and did not like to trust it in others' hands for fear it would get lost, therefore kept it to this date. I very readily forgave the delay, and thanked him for his services, being so glad to receive it at last *for sure.* I now sit down at my desk to let you know why I have not acknowledged the kind favour before. "You must have almost began to think too." Well, let it all pass now: we are O.K. once more. With my most sincere thanks for your kind regards, I will peruse and add to my stock of knowledge the contents of your last efforts to assuage the sufferings of the unfortunate invalid. Whether his disease is contracted by his own imprudence or not, your benevolent feelings seems not to have stopped to enquire. The question with you is, "How can I benefit my fellow-creature and relieve his suffering?" Would to God you had the power to teach what you know in one of the largest hospitals of London, to the downfall of all poisoncraft, that people might learn the cause of nine-tenths of their sufferings, and bid adieu to that cursed practice for ever. When I get in a train of thoughts on this subject, I feel my own shortcomings as an advocate in the ranks of Medical Botanists, and am ready to ask forgiveness for any real or apparent neglect of duty; and often regret that I have not the gift, like you, to enchain an audience for hours with the happy truths of its all-healing remedies, as experienced in my own case, as well as in thousands of others who have received the real, sound benefit of it. Nevertheless, I stand as a *living monument* to the effect of its healing power *over the poor consumptive's cruel disease*; and those of the five doctors who are still living cannot gainsay it, and, I believe, never have attempted it in earnest. My health continues first-rate. John Dorlon was taken sick the other day, and Addy, in her alarm, sent for Dr. Seymour, who pronounced the disease "gout in the knee," painted it with *iodine*, put two *blisters* on, and left some *blue pills* to take. John then sent for me. I told him

to throw the pills out of the window, and I would send him something better. I gave a laxative, and applied a poultice, with No. 6 drugs mixed in, to the knee: after it had been on a while, and the physic operated, the pain left, and the swelling went down; then I sent him some good bitters, and now he has no more use for his *crutches*, but is as well as ever. Some that saw him said, "he would never walk on that leg again, with it straight."

I see by the title-page in your work (for that is all I have looked at, till I mail this), that you are at 24 yet. Mr. Partridge spoke of your pleasant situation, and of the kind reception he received, and wished me to send you his best respects. For the book you sent to me, by him, my dear brother, I thank you, and shall take pleasure in studying its contents. May Heaven's best blessings rest on all your labours, is the prayer of your sincere brother, J. WICKES.

To brother A. I. and sister Sarah COFFIN. Please remember me to Dr. John Waters.

Troy, New York, April 10th, 1857. J. WICKES.

To Dr. COFFIN.

DEAR SIR,—According to promise, I take the opportunity of informing you respecting my little boy, you may recollect I brought to you on Monday, the 27th inst. He, as you observed, was in a very prostrate condition, so much so, that he would not eat or take anything, and was sinking from mere exhaustion, after being under Dr. R—, of Finsbury, for a week, he having seen him three times, and changed his medicine once, without any perceptible benefit; nay, rather the child grew worse. His complaint was whooping-cough; he could neither stand or walk. But I am happy to inform you, that after taking your medicine the first day, his appetite returned, and he can sit up to the table, and can walk a little, and he is very much better, so that we take him out for the air in the morning sun; and please God all goes well, I will bring him up for you to see him next week.—Dear sir, I remain, yours most respectfully, and ever grateful, Mrs. E.

A thorough convert to Coffinism.

16, *Pennyfields, Poplar, May* 5, 1857.

To the Editor of the Botanical Journal.

MR. EDITOR,—The following case, I consider, ought to be made public: Five years ago, a young woman of this parish, of about sixteen years of age, was afflicted with severe cough, pain in the side, and swollen legs. She was under medical treatment for a twelvemonth without relief, when her mother desired me to try the effects of herbs. I immediately commenced with the remedy in the "Guide to Health," for consumption, and after three quarters of a year of perseverance, taking the tea every six hours, she began rapidly to recover, and went to service, where she has continued ever since, and is now a fine, and healthy young woman, bearing ample testimony to the effects of Medical Botany.—I remain, sir, your obedient servant, J. GOULDEN.

Wishford, May 2nd, 1857.

SUBSCRIPTIONS
FOR THE BOTANIC HOSPITAL.

Mr. J. Harding £0 5 0

Those who read the Botanic Journal will see that for some time there has not been much said of, and very little contributed towards, the establishment of a Botanic Hospital. During the last eighteen months there has been a great depression in trade, and large demands have been made by Government in taxes, &c., in consequence of the late war, and it was mostly on that account that I have said little to urge our friends to come forward; but those difficulties are now passing away, and I feel that the friends and recipients of the good from the system should bestir themselves again. I have something more than £200 now contributed; our friends in Sheffield have £50 or £60 more; and several persons have promised (that may be depended upon) some £100, so that it may be estimated that £400 may now be raised. And why should it not be raised? If those throughout Great Britain, who have been benefited by the system, would contribute 1s. each annually to this object, the hospital would be established and supported, to the relief of thousands of the sick poor, who want the benefits that these one shilling contributors have already received! I am ready to devote some hours every day to attend that hospital without charge, as well as to contribute £20 per annum to its support. Besides, the system is now being introduced, and being adopted by many of the higher classes, in and about London, who will assist, as soon as they see the friends are trying to do for themselves and to insure its success. All we ask of our numerous agents is to do as our agent Mr. Joseph Naden and friends have done in Sheffield—get up a bazaar, and have a public meeting; and, as far as possible, I will attend those meetings, and the work would at once be done. I need not state that I have spent almost my whole life to give to the public the information that has so far benefited the suffering sick, for my friends are already acquainted with the facts, and I now only ask of them to do a *little* on their part, that not only the great object for which I wish to live to benefit the present generation, but the future generations may be also benefited, by the establishing a hospital and a school which shall be under the protection of Government. Let our agents and friends look at once into this matter, that while *I am able*, we may unite our energies, and produce the desired object, A. I. COFFIN.

24, *Montague-place, Russell-square.*

NOTICES TO CORRESPONDENTS.

All letters should be addressed, "To the Editor of the Botanical Journal, 134, High Holborn."

The real name and address of the writer of a letter must be given in confidence.

POST-OFFICE ORDERS and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

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COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

No. 236—Vol. VII. SATURDAY, MAY 30, 1857. Price 1d.

PYREXIA, OR FEBRILE DISEASES.

Among all the diseases to which flesh is heir none are so little understood, and none so dangerous, as those usually known as fevers. Upon them most medical writers have treated, and put forth their peculiar theories. According to their peculiar views they describe the cause of the disease, its usual symptoms, and the remedies for the recovery of the patient. But if we were to recite all that has been written on the subject, from the time of Hippocrates up to the present period, we should have confusion worse confounded in the variety and contradictory opinions which have been expressed. It must be evident to the most superficial observer, that fevers abound much more at certain seasons of the year than at others. Spring and autumn are the fever seasons; and this being a fact usually admitted, it may suggest the cause of fevers generally, and of local inflammations in particular. It is at those seasons, that, in this fickle climate of ours, the temperature of the atmosphere varies several degrees within any given twenty-four hours. Any sudden check given to the natural heat of the system produces an obstruction of the pores and other functions, which, when unimpeded, help to maintain the healthy *equilibrium* of the human constitution. And this will be sufficient to account for the symptoms of fever in all the varieties, from the slightest form of *intermittent* to the severest of the *typhoid* class. Celsus, and some of the most judicious of the ancient writers on pathology, agree in this view of the origin and nature of fever. It is, in whatever form it may appear, an interruption of the functions which are specially connected with the caloric of the human constitution.

With this very brief description of the cause and character of fevers, and without troubling our readers with quotations which might only confuse them, we proceed to notice some of the diagnosis, or symptoms, of this class of diseases. The dry skin, the furred and in some cases discoloured tongue, the rapid pulse, pains in the limbs and occasional shiverings, are among the most common and obvious symptoms. Where these signs exist, there can be no doubt that the equilibrium of animal heat is disturbed, and therefore the remedies prescribed for fever in Dr. Coffin's "Guide to Health" may be resorted to with certainty that relief will be obtained, and the health of the sufferer restored.

The advantage of the hot bath and sponging must be very clear to every one, as by this process the pores are cleansed, circulation is promoted, and heat is equally diffused over the whole surface of the frame. The external obstructions being thus removed, it is next desirable that all internal crudities should be removed, and tonics and stimulants be administered, that by these means a free action on the skin may be kept up, and the balance of heat be restored to the whole system. In all disease, much of the hope of recovery depends upon the promptness with which efficient remedies are administered; and to no form of disease does this remark apply with greater force than to fevers.

Many are the instances in which fevers have proved fatal through delay in attempting to arrest their progress. Real pathological science explodes the old-fashioned theory of the *course* of a fever necessarily extending to a certain number of days, before it *can* be abated, and consequently before any means can be effective. This theory is just as absurd, as if a man seeing his neighbour's house on fire, should stand by with folded arms, watching the progress of the flames, and forbidding any efforts to be made until the fire had progressed so far as to cause the roof to fall in, and then he would exert himself to the utmost, call all the fire-brigades in the nation, and ply all the engines at command to extinguish the burning mass. We have seen the allopaths adopt this course, refusing to take any measures until the fever had advanced another and another stage, until delirium has fully set in, and then they have poured in their pills, and draughts, and mixtures, wholesale. Does not any man's common sense tell him to do all in his power, and as quickly as possible, to extinguish the devouring flame immediately it is discovered? So we advise in reference to fever. Let there be no waiting, but energetic action in vigorous efforts to subdue the fever as soon as its existence is discovered, and before it has done irreparable mischief to the constitution. Parents and heads of families, proprietors of schools, and all who have lives entrusted to their care, should not only make themselves familiar with the remedies as given in Dr. COFFIN'S "Guide to Health," but have all appliances in readiness, so that they may be used upon any emergency.

MEDICAL REFORM IN AMERICA.

THE following letter from Dr. Hall will give our readers some idea of the extent to which the new Medical School has obtained ground in America. With a great number of practitioners the drug system is exploded, and a college being now established, which is educating its members on the true principles of hygiene, and they are boldly demanding (and with some success, and with every probability of soon obtaining their object), the sanction of Government to equal rights and privileges with the orthodox medical schools. We trust this will have its influence in our own country, and encourage the friends of progress to hope that the errors of the old school will not always prevail:

To the Honourable Members of the Legislature of the State of New York.

A petition has been sent to your honourable body to charter the New York Hygeio-Therapeutic College. The petition has been noticed in the assembly, and referred to the committee on medical schools. I am informed that the chairman of that committee, Dr. Paul, an allopathic physician, has signified his intention to report against it. When I consented for the petition to take that direction, it was understood that Dr. Paul would report it favourably.

Last year the petition was referred to the judiciary committee, because Dr. Bradford, another allopathic physician, who was then chairman of the committee on medical schools, expressed himself adversely to it. It was, however, reported unanimously by the judiciary committee, passed the Senate and House by a very large majority to its third reading, and was only lost because the Legislature adjourned with a large amount of business unfinished.

I call the attention of the members of the Legislature to the following brief statements of facts, bearing on the measure before them, and their duty in the premises.

The school for which a charter is desired has been in existence four years. It has a full complement of teachers, and gives a thorough course of instruction in all the branches of a medical education. Its graduates are in good practice in various parts of the United States, as teachers of the laws of health and practitioners of the healing art. The school will continue to exist and its graduates will continue to go forth, with or without a charter, and with or without justice at the hands of the Legislature, and with or without manly consideration or professional meanness on the part of medical men of a rival system.

But we shall continue to ask of you what we can demand as a right. We

base our claim to a charter on the following facts, each one and all of which we will prove to your honourable body whenever you will give us audience or other opportunity. Our students are qualified to teach the people the *prevention of disease*, as well as to practise its cure, a feature unknown to any other medical school.

Our students are taught a more successful method for curing diseases than is taught in any other medical school, their remedial appliances being hygienic agencies alone, thus dispensing with all the poisons of the apothecary's shop, and avoiding the horrible drug-diseases which are filling our land with miserable wrecks of mortality and broken-down constitutions.

Our school teaches the *true science of medicine*. The popular schools teach a *false system*. Their system is based on *false premises*, and hence nearly all its problems in pathology and therapeutics are erroneous. They teach a false doctrine of the *action of remedies;* a false doctrine of the *nature of disease;* a false doctrine of *etiology*, or the causes of disease, and a false doctrine of the *laws of vitality*, on which all correct medical science must be based.

We have offered, and now through you repeat the offer, to prove these positions, either in argument before your honourable body, in discussions through the newspapers, or in verbal controversies in public halls, or in any other way that medical gentlemen opposed to our system may appoint, so that the merits or demerits of our respective systems may be brought fully and fairly before the public.

We offer also to prove the superiority of our system of practice in any convenient way. We will, if permitted, go into any of our large public hospitals at any time, and, at our own expense, treat similar cases side by side with the physicians who use drug remedies. We will make no exception to any kind of diseases, but will agree to rest our system on our superior success in treating *all diseases, of whatever name or nature.*

In asking for a charter we want no favours. We wish merely equality. We ask to have the privilege of giving our students legal and "regular" diplomas, whenever they are qualified to practise the healing art. Their qualifications may be ascertained in any way the Legislature may be pleased to appoint. We are willing to be placed under all the obligations of other medical schools, and then we want the same "privileges and immunities." We do not object to have all allopathic physicians as censors when our students are examined. Nor do we ask or expect money from the public treasury. Appropriations may continue to go with the popular current. The public purse, as heretofore, may be opened liberally to aid and endow the already rich, strong, and powerful—those who would crush us out if they could, simply because we have a better way for preventing and curing diseases, and the boldness to proclaim it to the world.

In conclusion, gentlemen of the Senate and House of Representatives, we ask respectfully, and demand firmly, equal rights with other medical men, and equal privileges with other medical schools, while we offer to prove the superiority of our system and the justness of our claim in any way and by any test your honourable body may indicate.

R. T. Trall, M.D.,
Principal N. Y. Hygeio-Therapeutic College.

MAY AND ITS WILD FLOWERS.

(Continued from page 330.)

From every hedge we may now gather the flower called treacle mustard *(erysimum alliaria)*. It grows to the height of two or three feet, has small white flowers of the shape termed by botanists cruciferous, because forming a cross, like those of the wallflower. The leaves are as large as those of the nettle; and, when broken, yield a most powerful odour of garlic, which renders the plant very offensive in a nosegay, and which even scent the dried specimens in an herbarium. It was formerly cultivated in kitchen gardens, as a salad plant.

A large number of yellow cruciferous flowers, as the wild cabbage, or coleseed *(brassica napus)*, the common turnip *(brassica rapa)*, and the various kinds of mustard, now show themselves among the young spires of the green corn-field;

and in neglected fields, threaten destruction to the blade. The charlock, or wild mustard *(sinapis arvensis)*, is, too, common on the cultured land, and gives much trouble to the farmer. Its seeds are pungent and acrid; and are often mixed with those of the species cultivated especially for mustard. It is called in the different counties, charlock, garlock, or chadlock; and in Yorkshire is commonly known as runch. The foliage is rough, and the flowers large and yellow. The kind chiefly planted for the table condiment, is the black or common mustard *(sinapis nigra)*, which is also a wild flower on waste places; but the seeds of all the species are hot; and afford, on expression, a pungent oil; or, when dried, a stimulating powder. Our word, mustard, and the French word *moutarde*, are corruptions of the words *mustem ardens* (hot must), as the French prepare the mustard used at their tables with the sweet-must of new wine.

All the plants which have cross-shaped flowers contain, in greater or less degree, the acrid, volatile, oily principle which is so abundant in the mustard-seed and the root of the horseradish; and is less perceptible in the common wallflower or the watercress. In all cases, cruciferous plants may be eaten with safety; but, in many instances, the acrid principle must be reduced by culture, or by blanching, before they become palatable. When the texture of a cruciferous plant is very succulent and juicy, it is always eatable; as in the case of the common cabbage-leaf, and in the radish, or turnip.

The sight of any of our numerous wild mustard plants will often suggest to the reader of Scripture the words of our Saviour: "The kingdom of heaven is like to a grain of mustard-seed, which a man took, and sowed in his field: which indeed is the least of all seeds; but when it is grown, it is the greatest among herbs, and becometh a tree; so that the birds of the air come and lodge in the branches thereof." A great variety of opinion has been entertained as to the species intended in this text. The Eastern mustard *(sinapis orientalis)* has been often considered as the Scripture mustard. It is very common in Palestine, and very similar in appearance to our charlock. The warmth of the climate, however, renders it far more luxuriant; and it attains the height of a shrub, or even a tree; but as it has not a woody stem, or branches, and it dies down to the ground every winter, it can scarcely be called a tree. Here again, we must refer to that valuable work, the "Pictorial Palestine." The author of this book quotes from the travels of Captains Irby and Mangles. Speaking of vegetable productions in the neighbourhood of the Dead Sea, these travellers say, "There was one curious tree, which we observed in great plenty; and which bears a fruit in bunches, resembling in appearance the currant, with the colour of the plum. It has a pleasant, although strongly aromatic taste, exactly resembling mustard; and, if taken in any quantity, produces a similar irritability of the nose and eyes, to that which is caused by taking mustard. The leaves of the tree have the same pungent flavour as the fruit, although not so strong. We think it probable that this is the tree our Saviour alluded to, in the parable of the mustard-seed, and not the plant we have in the north: for although, in our journey from Bysan to Adjeloun, we met with the mustard plant growing wild as high as our horses' heads, still, being an annual, it did not deserve the appellation of a tree; whereas the other is really such, and birds might easily, and actually do, take shelter under its shadow." Kitto, commenting on this quotation, remarks, "The Jewish writers speak of a mustard-tree common among them, in quite corresponding terms; seeming to show that a species of the *sinapis*, or some analogous genus, existed is Palestine, with which we are not well acquainted; and which may very probably prove to be that which Captain Mangles has pointed out."

One of our wild species of mustard, the broad hedge mustard, or London rocket *(sisymbrium irio)*, is exceedingly common on waste grounds, in the neighbourhood of the metropolis; and is remarkable as having sprung up immediately after the great fire of London, in 1666, and quickly covered the ground where the city had stood. So profuse was this flower, in a few weeks after the fire, that it was supposed by the botanists of those days, that a greater quantity

existed on that one spot, than could have been collected from over the whole surface of Europe; and it is a singular instance of vegetable growth, for which no naturalist has ever been able to account.

A peculiar circumstance connected with a flower of this and the coming month, is, that it has bloomed for centuries on a lone place in the sea, and is almost unknown as a wild flower in every other part of England; this is the wild peony *(pæonia corallina)*, which lifts its red blossom on the island in the Severn called Steep Holmes. It is stated by Gerarde to have been found, in his time, near Gravesend; but if it grew there in those days, it has disappeared since. The Rev. W. Lisle Bowles thus notices it:—

"The cliff abrupt and high,
And desolate, and cold, and bleak, uplifts
Its barren brow! barren; but on its steep
One native flower is seen—the peony—
One flower which smiles in sunshine and in storm.
There still companionless, but yet not sad,
She has no sister of the summer field,
None to rejoice with her, when spring returns.
None, that in sympathy may bend its head
When evening winds blow hollow o'er the rock
In autumn's gloom!"

This flower is distinguished by the name of the entire-leaved peony, because its leaves, unlike those of the garden species, have straight, uncut edges; the blossoms too are single.

The dark purple flag, or iris *(iris fœtidissima)*, called, when planted by gardeners, the Gladwyn iris, may be found in May and June, on meadow land and in thickets, in the south and west of England. In Devonshire it is a very common flower; it is not unfrequent in some parts of Kent. In the northern and midland counties, it is rare, and has not been known to grow wild in Scotland. This flower has a strong odour of roast beef; the leaves and roots, steeped in beer, are taken as a medicine.

One or two species of *lychnis* are now in bloom; and in meadows and cornfields, the bright flowers of the red lychnis, or campion *(lychnis dioica)* are very common. This is a flower shaped a little like that of the primrose, but the stem, when on moist lands, often rises two or three feet in height. There are many species of wild lychnis; one is very commonly known, from its jagged petals, by the name of ragged robin, or cuckoo flower *(lychnis flos cuculi)*; it is frequent by streams, and its pink flowers are very similar to those of the common garden *clarkia*. It is also called bachelors' buttons, because, as Gerarde says, "the similitude which those flowers have to the jagged cloth buttons, anciently worn in this kingdom, gave occasion to our gentlewomen, and other lovers of flowers, in those times, to call them bachelors' buttons."

The flower called golden saxifrage *(chrysosplenium oppositifolium)* is now in bloom by river sides; and several of the true saxifrages, of which there are twenty-one wild species, are in flower during this month. The golden saxifrage is remarkable for its medicinal virtues, and is much esteemed as a salad, in the Vosges, where it is termed *cresson de roche*. Several species of saxifrage grow on rocks or stones; one very common kind is often found on old walls; this is the rue-leaved saxifrage *(saxifraga tridactylites)*, which flowers in May; it has small white blossoms, and the leaves and stems are covered with thick, viscid hairs. The white meadow saxifrage *(saxifraga granulata)* is not uncommon now in meadows and on hedge-banks; it has a much larger flower than the last species, and is remarkable for its root, which consists of a number of small knobs, strung together, and of so bright a red as to resemble a string of coral beads. But the best known species is the flower called London pride, or none so pretty, which is so often the ornament of the cottage garden border, and which, perhaps, received the former name because it will grow on the little soil which borders the paved yards of the city, and is uninjured by smoke or fog. In Ireland, it is called St. Patrick's cabbage, and its old name of "Queen Anne's needle-work" is expressive of its flower, which resembles a most beautiful embroidery, and well repays examination with a microscope.

The flowers of May may be concluded with some account of a plant, so fragrant and useful, that although it has not ornamental blossoms, its flower being on a catkin, or cone, yet it well deserves the notice of all who value our wild plants.

The sweet gale, or Dutch myrtle *(myrica gale)*, grows on boggy or moory grounds; its fragrance resembles that of a myrtle, but is much more powerful, and not only scents the air while growing, but, when gathered, perfumes the room. The Highlanders lay its branches in their linen-chests, to scent their clothes and to drive away the moth. The Welsh place it under their beds; and, in some parts of Scotland, it is strewed with the heather for the nightly couch. In Sweden it is used for a variety of purposes; a dye is made from it, and a common medicine, and it serves instead of hops to give the preserving principle to beer; but it is less wholesome than the hop.

PARLIAMENTARY POISONS.

To the Editor of the Botanical Journal.

DEAR SIR,—I see by a notice in this day's *Times*, that a Bill to regulate the sale of poisons is being brought into the House of Lords, and Lobelia is included among the poisons.

Surely, with the overwhelming evidence in our favour, if properly managed, this will give us an opportunity of fairly and thoroughly bringing the subject before the public.

Hoping to see an early notice in the Journal,

I am, dear Sir,
Yours truly,
JOHN STEPHENS.

P.S.—Perhaps petitions to both Houses of Parliament would do good. A form of petition might be recommended in the Journal. J. S.

This is a good opportunity, which the friends of Medical Botany will do well to embrace, to furnish testimonials to the benefit they have derived and witnessed from the judicious administration of LOBELIA. Such testimonials would greatly strengthen any application to Parliament. A form of petition shall be furnished in our next number.—ED.

THE GREAT TOBACCO QUESTION.

To the Editor of the Journal of Health.

SIR,—Some twenty-four years ago, it was my misfortune to make an attempt to learn the very foolish and dirty habit of smoking tobacco; an attempt that was followed with nausea, severe sickness and vomiting, accompanied with excruciating pains in the stomach and bowels, which lasted for upwards of two hours. During these sufferings, I well recollect with what energy and bitterness of feeling I resolved to have no more to do with the *mis*-named fragrant weed; but, I am sorry to say, that the taunts and inducements of my companions prevailed against all my resolutions. I made a second attempt, and with exactly the same results.

Not being very much in love with the stigma of coward, I essayed a third and fourth time to subdue the efforts nature made to keep the insidious enemy at bay, and to provoke an abnormal appetite for this filthy practice. In three months, by continual perseverance, I had become an adept in the black art, and could smoke my pipe with as much gusto and impudence as any matured and inveterate smoker.

Now, sir, that this practice can, and often has, a bad moral effect upon its victims, was very remarkably exemplified in my own case. My father being a smoker, of course had his weekly consumption bought on every Saturday night; and I, not being often troubled with much of the precious metal, wherewith to buy, acted on a suggestion given by one of my companions, and from that time I continued regularly to supply myself from his store. At first I took little, then more; afterwards I screwed up my courage to take away as much as half the whole quantity. In process of time I was found out, and was prevented from this mode of furnishing myself with the object of self-pollution; but the habit had now become so confirmed, and the appetite so strong and craving, that I determined it should be indulged at all hazards. I therefore hesitated but little to rifle the pockets of my parents, and extract therefrom, first copper, then silver too; and so hardened in this petty pilfering did I become, that I verily believe if I had been caught in any one of these latter actions, I could have mustered up the boldest effrontery and doggedness, and denied any and every charge that might have been brought against me. I dare not now say that tobacco-smoking has this for one of its

naturally inherent influences, and that it is irrespective of individuals; but most assuredly I can say, that but for this practice and its concomitants, I should not now have had to make these dishonourable confessions.

It was during my career of smoking, and smoking companions, that I first entered a public-house, and witnessed and felt the evil influences these dark blots upon God's lower paradise exert upon man; and though I had always been accustomed to drink mild home-brewed beer, and had an instinctive repugnance to that manufactured and dealt out at the public-house, yet I found that the habit of smoking had exerted such an influence on my tastes in this respect, that I could no longer be satisfied at home, but must have something of a stronger and a more pungent character. From my own individual experience, I can testify to this truth, that tobacco-smoking and drinking intoxicating beverages act and react on each other to produce in their votaries nothing that is necessary, useful, or good.

After I had continued the practice for about three years, I began to be troubled with a foul tongue and a horridly fetid breath; my digestion was also much impaired, and very frequently I had to suffer from an agonising pain about the region of the stomach, which left me as soon as the accustomed stimulus, the pipe, was resorted to. I found, too, that my teeth (which hitherto I considered a most perfect and almost unique set) began to be affected, from the slight, stinging pains which now and then occurred from them; by-and-by little dark spots made their appearance on the sides and upper edge of some in the lower jaw, especially those which had been in contact with the tobacco-pipe. Very soon they began to ache; for days, and sometimes weeks, incessantly they troubled me with their ever-protesting voice; and ever I resorted to the cause which had produced this for a temporary relief, and which only sometimes I found. Next they began to get discoloured, and disgusting to the sight and smell. In the end, five of them decayed and dropped out, and the whole set was for ever rendered incomplete. This I felt to be a grievous circumstance, and a consummation not at all to be wished.

Nor was this all, for I had begun to have an irritation and soreness on the lips and chin that disfigured them greatly, which I now attribute solely to the action of tobacco, in conjunction with the filthy matter adhering to it, and which partly arose from the dust and vitiated saliva, of which latter fluid the quantity was increased to such an enormous extent as to flow out and run down the pipe and sides of the mouth, nowise adding to the beauty of the practice, or to my outward appearance. This brought on a most repugnant habit of spitting, which I still suffer from, though it is now ten years since I threw away the whole trap and trash.

That smoking irritates the temper of those who become slaves to it, can scarcely be doubted by any unprejudiced mind. I have found in my own person, and in those with whom I have associated and mixed, that it tends to render them peevish, cross-grained, and put about by the merest trifles. It creates a morbid condition of the passions: hence I have generally found that it is accompanied by reckless impudence and blackguardism. Its effects on the feelings tends to produce a sort of maudlin sentimentalism—a love of highly coloured, inflammatory, and prurient kinds of imaginative literature. The life of a smoker is truly little else than one continuous dream-frenzy, marked by nought so much as an absence of all manly and energetic strivings for the development of his own capabilities and the elevation of his race.

I know we have had men—great men—such as Quincy and Hall—who say that tobacco-smoking helps reflection and promotes thinking; but I opine, sir, that that man is in a sorry plight who needs such a substance at all for these purposes. It seems to me, it is but a poor excuse for human weakness and stupid self-gratification.

Is not the mind of itself capable of reflecting and evolving thought without having recourse to such a mean, contemptible thing as smoke? Does that which is capable of such wide expansion, and has produced such gigantic and magnificent results, receive its power and inspiration through the tiny aper-

ture of a frigid, inanimate, clay smoke-conductor?

Is not the whole universe of God filled with all-inspiring subjects and things? What means the sublime subjects and facts of art, science, and philosophy? What means the verdure of the fields, with all their silent beauty, and varieties of plants, flowers, vegetables, and animal creation—the umbrageous woods, rich with melodious sounds—the gray grandeur of these vast masses of towering rocks that strike the beholder with wonder and awe, and which have withstood the hand of all-devouring time for so many ages?—the briny, ever-wide, heaving sea, with its multitudinous mechanisms of life—the stillness, brightness, and the beauty of those orbs shining with such distinctness up there? Are there any power and inspiration in these things that come not but through the medium of clay and smoke?

Certain it is that when once man has got rid of the films before his eyes, he can see more distant, and pierce deeper into his searchings; and when once he has learned to deny himself, to sacrifice his bodily and sensual instincts, and thereby ennoble his mind and soul, then a wider, a more correct, and a diviner field of motives and actions is opened out before him, and then, and then only, he stands in his own rank as man made in the image of his Creator, equipped for a higher vocation, and destined for a nobler purpose, than that of a slavish, smoking dreamer or thinker, be he as high in fame as Parnassus itself, or as powerful and gigantic in his labours as Hercules, and his accomplishments as numerous as the sands on the sea-shore.

Since I gave up this pernicious habit, I find a more exquisite pleasure in abstinence from it, a pleasure which in the brief space of a single moment more than balances the scale in which are placed all the time and money I spent, and all the misnamed advantages and enjoyments I reaped when a slave to it. My life, my hopes, my thoughts have all been of a higher and a deeper character, and I trust far more acceptable to my Maker.

I am but a humble individual, yet I believe my example in this respect has not been without its fruits (for my history is well known where I live); still I labour on, seeing much before me that requires my aid, coming in contact with many evils and hindrances to social and moral progress, and in the removal of which I find my helping hand is not only necessary, but exceedingly beneficial to my own soul in many respects, and amongst the giant evils of the day there are not many that produce such ravages on health, and life, and on the beauty of our self-immolated brethren of this nation, as that of tobacco-smoking. That these confessions, written for a single end, may be instrumental in giving light to one poor, suffering, deluded brother, or help him to throw off one of the heaviest and direst incubuses that ever mortal groaned under, is the sincere wish of his friend and brother, GEORGE PERKIN.

Burley, near Leeds, April 6th, 1857.

P.S.—After I gave up smoking, the soreness and irritations on my lips and chin entirely disappeared, my teeth (although some of them are now partly decayed), have only pained me four times in ten years; my digestion strengthened, and my health generally, considerably improved; the tone and vigour of my mind are stronger and purer. I have now not much love for inflammatory and prurient literature: altogether, I am a freer, and better, and happier man.

IMMORALITY OF DRINKING.

GREAT objection has been made to branding the use of alcohol as a beverage, as an immorality. Objectors should examine this question calmly, and by the light of reason and truth; add to which, *experience.* Is not the command in God's holy word, "do thyself no harm," as binding as not to lie, or steal, or commit murder? If we persevere in a course which serves to shorten life, do we not commit wrong? I cannot but consider the use of intoxicating drinks as a beverage in health, *always* injurious; *never*, *never* beneficial; and as alcohol is the basis of intoxication, I find it quite out of my power, rationally, to make any distinction between one kind of intoxicating liquor and another. I class them altogether; and if it be not immoral to

drink it in one form, it cannot be in another. My view of the immorality of the act depends, in a great measure, on the knowledge we possess of the tendency of it. I have not the least question that the individual who, in health, drinks alcohol as a beverage, *does himself harm just in proportion to the quantity he drinks.* While drinking it, if he believes in his conscience that he is benefited, not injured by it, he cannot, as I view it, commit a sin against God, although I consider he does violence to his constitution. But should he stubbornly refuse to examine the subject, and wilfully shut his eyes to the means of information within his reach, then the question presents itself in another light. God sometimes winks at the sin of ignorance, as He has informed us in His word; but if we will not have light when we can by searching, have we any excuse?—*E. C. Delavan.*

LECTURES ON MEDICAL BOTANY AT OXFORD.

Two deeply interesting and instructive lectures on Medical Botany, as introduced into this country by Dr. COFFIN, were delivered in this city on the evenings of the 15th and 16th of April, by Mr. B. V. Scott, being the first time our noble cause has been publicly advocated in Oxford. The chair was taken the first evening by Captain King, of London, and the particular subject was allopathy and its errors, which was treated in a very able and spirited manner, especially the fallacy of counterirritation and the use of poisons. The second lecture was Medical Botany. The principle that heat is life, &c., was admirably sustained throughout, and the lecturer perfectly succeeded in convincing the whole of his audience (excepting a chemist or two) of the error of the one system and the truth of the other. At the conclusion, a vote of thanks was unanimously given to the lecturer, by a very numerous and respectable audience, which was acknowledged in appropriate terms. These lectures are considered, in Oxford, as quite a triumph for Medical Botany, there being no opposition whatever, and the only regret expressed was, that the room was not larger, and that there was not another lecture on the following evening.

THE CATTLE MURRAIN.

A VERY proper alarm is being excited about a murrain among cattle, which has appeared abroad, and also in this country, and against which various stringent provisions are loudly demanded. The subject received considerable attention in the late Parliament, when the government was urged to take precautionary steps in the matter, which they have *now* done, when the disease has made its appearance amongst us. But it is our disgrace, as well as a very serious calamity, that our government gives no *serviceable* help on these occasions. It collects no information, diffuses no knowledge, makes no inquiries. If this or any other disease stays away, or remains undeveloped, well; if it comes from abroad, or springs up at home, the State has done nothing to diminish that ignorance by which its effects will be increased. True, we have a Board of Health, but what does it? Such a board, well constituted, would attend to these, and a variety of other matters, which would prove less expensive and far more beneficial than much of what is actually doing. But the neglect of the government does not justify the people's apathy; it should rather awaken their zeal and quicken their energies.

We are glad to observe that here and there a few medical men, as well as the press, are taking up this question; in particular, a letter in the *Times*, shows that many animals are diseased with scrofula, hydatids, measles, and consumption; and that those who eat such animals must, in their turn, become the victims of similar complaints. To suppose that a person could partake of the flesh of such animals, and that no injurious effect should result from it, is contrary to the laws of nature and common sense. Dr. C. Whitlaw says, "I do not allow my patients to eat diseased butchers' meat, nor indeed the fat of any meat, as the oils of poisonous vegetables are taken into the circulation, and deposited in the cellular membranes, and other parts of the bodies of the animals feeding upon them. When such meat is eaten, it is sure to produce bilious attacks and indigestion, especially in weak stomachs." This theory accounts for hundreds of diseases and deaths for which the doctors cannot account.

STATISTICS OF MEDICAL BOTANY.

(Continued from page 331.)

Name and Residence.	*Age.*	*Ailments.*	*Previous Medical Attendants.*	*When com. Botan. Treat.*
Harold Giddings, 12, Totton-st., Stepney Churchyard.	4 mts.	Cutaneous eruption.	The vaccinator.	March, 1856.

This infant's head and face were completely covered with sores and scabs, of a very painful nature, which the parents attributed to vaccination, as the child had not a speck before it was contaminated with the foul lancet. By a free use of lobelia ointment, lobelia emetics once and twice a week, and the usual cleansing wash, the baby was cured in six weeks, and has had no return since. *The parents declare they will never have another child vaccinated.* It is perhaps not generally known that vaccination is no longer compulsory, the House of Commons having rejected the compulsory clauses in 1854, and again when they tried to pass the Bill in 1856. The coercive notices therefore supplied by the Registrars may be disregarded. We are indebted to Mr. Duncombe, the honourable and worthy member for Finsbury, for publicly stating, in his place in Parliament, that the Bill does not provide any public prosecutor, nor money to prosecute with. The law is therefore inoperative, and not enforced. I have prevented many from being vaccinated.

Mr. J. Brisbane, 18, Holmes-st., Stepney.	45	Contusions from a fall.	Refused the usual medical treatment.	

This patient accidentally fell into a ship's hold; he was very much bruised and cut externally and internally; being a weighty man, and of gross habit, there was great difficulty in keeping down inflammation. The vapour-bath, however, and stimulative diaphoretics, with lobelia emetics, liniments, poultices, &c., subdued the malignant symptoms in three days, and he was enabled to leave his bed the seventh day; was then confined to his room two weeks, and returned to work in six weeks. Mr. B. refused the services both of the dock and club doctors; he believes, if he had placed himself under their treatment, the inflammatory symptoms would have increased, and that *if he had recovered at all*, his illness would have been a tedious one, and protracted for months. He was visited from time to time by the club officers, who were perfectly satisfied with the treatment, and accepted my medical certificate for the sick allowance. Other club members should claim the same privilege.

Mrs. Strowman, 4, Smiths'-arms-place, Back Church-lane, St. George's East.	30	Rheumatic fever.	Usual medical treatment.	23rd Nov., 1856.

Mrs. Strowman was confined on the 15th November, previous to which she had slight attacks of rheumatism; on the 23rd I was sent for, as I had cured similar cases known to them. I found her quite helpless, and racked with pain, with a fine baby, but could obtain no relief from her medical attendant. I gave her medicine according to the "Guide to Health," with cayenne liniment, and she had to be lifted in and out of bed to the vapour-baths. When I called on Sunday, 30th November, she was sitting by the fire nursing her baby: the medicine was continued another fortnight, and both mother and child have enjoyed good health ever since.

One more paper will, I hope, be sufficient to call the attention of other agents to the subject, so that we may have similar testimony from all parts of England.

Reference may be made to these cases.

JOHN STEPHENS,
108, Ratcliff Highway.

Mrs. Buddels, South Shields—came to Haswell.	32	Fever, inflammation of the stomach and liver, very distressing cough, and vomiting, debility.	Objected to the usual medical treatment.	February, 1857.

This case was considered hopeless by all that attended her, as it was the opinion of

them that she was in a consumption. I was called on to attend her, and found her labouring under the above symptoms, and very weak. A thought struck me, it would be needless to risk Medical Botany here: at last, seeing her strongly object to the usual treatment, I commenced to subdue the inflammatory fever with cayenne tea; and by the aid of tonics, as stated in Dr. COFFIN's "Guide to Health," and lobelia syrup, in four weeks she was restored to good health. Had she undergone the usual treatment of the faculty, her case would doubtless have been a bad one.

Mr. Surtis, 27, Haswell Colliery.	29	Inflammation of the lungs, and severe cough.	One medical man, an M. D.	January 15th, 1857.

This patient was distracted with pain. When his usual medical attendant was sent for, he ordered a little wine, as he thought it weakness. Mr. Surtis, not being satisfied with the wine, I was sent for, and found him labouring with all the symptoms of inflammation, cold, clammy sweats, &c. I commenced with pure stimulants, and a lobelia emetic, and, by the aid of Botanic Remedies, in two weeks he was able to follow his employment. Here the reader must bear in mind that in all such cases the Botanical Treatment, if *duly tested*, will be found superior to any other.

Thomas Thompson, Shotton, near Durham.	4	Scarlet fever.	Parents objected to the usual medical treatment.	March 12th, 1857.

In this case I was called on, and found the child labouring with all the symptoms of scarlet fever. The Botanic Treatment is a boon to Society, as laid down by Dr. COFFIN, in such diseases as fevers. In a week this child was recovered by stimulating and tonic medicines. More cases might be given if needed. We speak from experience when we say that the remedies if used in Medical Botany will prove blessings.

WILLIAM ANDERSON, Shotton, near Durham.

SORGHUM SACCHARATUM.

CHINESE SUGAR-CANE.

SINCE its introduction into the United States, this plant has proved itself well adapted to this geographical range of Indian corn. It is of easy cultivation, being similar to that of maize, or broom-corn; and if the seeds are planted in May in the Middle States, or still earlier at the south, two crops of fodder can be grown in a season from the same roots, irrespective of drought—the first one in June or July, to be cut before the panicles appear, which would be green and succulent like young Indian corn, and the other a month or two later, when or before the seed is fully matured. The amount of fodder which it will produce to the acre, with ordinary cultivation, may be safely estimated at seven tons, when green, or at least two tons per acre when thoroughly cured. The stalks, when nearly mature, are filled with a rich saccharine juice, which may be converted into sugar, syrup, alcohol, or beer, or may be used for dying wool or silk a permanent red or pink; and the entire plant is devoured with avidity, either in a green or a dry state, by horses, cattle, sheep and swine.

Considered in an utilitarian point of view, this plant, perhaps, has stronger claims on the American agriculturist than any other product that has been brought to this country since the introduction of cotton or wheat. Aside from other economical uses, its value for feeding to animals alone, in every section of the union where it will thrive, cannot be surpassed by any other crop, as a greater amount of nutritious fodder cannot be obtained so cheap, on a given space, within so short a period of time.

This plant is *not*, as some have asserted, the "Dourah corn," or "African," or "Egyptian," or "chocolate," or "mummy corn," and should not be cultivated near that variety, nor near broom corn, a well known variety of *sorghum*, because the seeds will mix, and destroy the value of the sugar-plant.

Success, with the mass of mankind, is regarded as an occasion of respect, and few persons stop to scan the motives which have governed and the means which have been employed by the individual in achieving his success.

FASHIONABLE WOMEN.

Fashion kills more women than toil and sorrow. Obedience to fashion is a greater transgression of the laws of woman's nature, a greater injury to her physical and mental constitution, than the hardships of poverty and neglect. The slave-woman at her tasks will live and grow old, and see two or three generations of her mistresses fade away. The washer-woman, with scarcely a ray of hope to cheer her in her toils, will live to see her fashionable sisters all die around her. The kitchen-maid is hearty and strong, when her lady has to be nursed like a sick baby. It is a sad truth that fashion-pampered women are almost worthless for all the great ends of human life. They have but little force of character; they have still less power of moral will, and quite as little physical energy. They live for no great purpose in life; they accomplish no worthy ends. They are only doll-forms in the hands of milliners and servants, to be dressed and fed to order. They dress nobody; they feed nobody; they bless nobody, and save nobody. They write no books; they set no rich examples of virtue and womanly life. If they rear children, they have nothing to do with them, save to conceive and give them birth: servants and nurses do it all. And when reared, what are they? What do they even amount to, but weaker scions of the old stock? Who ever heard of a fashionable woman's child exhibiting any virtue or power of mind for which it became eminent? Read the biographies of our great and good men and women. Not one of them had a fashionable mother. They nearly all sprung from plain, strong-minded women, who had about as little to do with fashion as with the changing clouds.—*G. S. Weaver.*

SALEP.

Mr. Archer lately stated to the Society of Arts, in a very interesting account of some of the foreign commerce of Liverpool, that the use of salep has revived in an unexpected manner. The knobs of which this substance consists are the roots of such terrestrial orchids as our orchis mascula, &c., and they once formed a pleasant beverage sold at the corners of streets in the early morning, under the name of "hot saloop," just as coffee is now sold. Mr. Archer tells us that he should have been much puzzled at the importation of salep not only continuing, but increasing, had he not traced a lot of the root to the manufactory of a chocolate-maker, from which he presumes that it is occasionally employed in that preparation. At all events, he is persuaded that salep might be advantageously employed in the manufacture of cocoa and chocolate. This conjecture seems to derive support from the nature of the aromatic principle which is present in well-prepared salep. One of the most costly ingredients in chocolate is vanilla—the pod of a climbing orchid—valued not only for its fragrance, but its stimulating qualities. The weak odour of orchis roots appears to be identical with that of vanilla, as indeed is the fragrance of the whole race, however much it may be modified or disguised by the presence of other "essences." Possibly we have the commencement of a new source of employment for women and children in the districts where the common orchis grows wild abundantly; possibly, also, some of the South African species, whose roots are so much larger than our own, may pay for collecting at the Cape of Good Hope and the adjacent colonies.—*Year-Book of Facts*, 1857.

OBITUARY.

It is our painful duty to announce the lamented event of the death of Mrs. Mary Ford, of 134, High Holborn, who departed this life, after a protracted illness, on Monday the 18th inst. She was highly esteemed by a large circle of friends, as one who had fulfilled the duties of a faithful wife, and an affectionate mother. She has left eight children and her husband to mourn her loss.

NOTICES TO CORRESPONDENTS.

All letters should be addressed, "To the Editor of the Botanical Journal, 134, High Holborn."

The real name and address of the writer of a letter must be given in confidence.

Post-office Orders and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

No. 237—Vol. VII. SATURDAY, JUNE 13, 1857. Price 1d.

LOBELIA INFLATA IN THE HOUSE OF LORDS.

My friends in various parts of the country have expressed their fears, that this most invaluable medicine will be taken from them and their families, by an Act of Parliament classing it among the poisons. For the information of our friends, I would say, I have not been idle on this all-important question. I have sent a statement of facts to Lord Granville, and have, as far as possible, placed myself to be examined, should the Bill be referred to a Committee; but as yet, nothing has been done definitely. Mr. T. Duncombe, our Member, has had two or three interviews with Lord Granville, and has assured him, that he will be prepared, should he persist in retaining Lobelia on the list of poisons, to oppose it in his place in the House of Commons, and, so far as I can gather from the facts as they stand, I have no fear, that in this enlightened age, Parliament will pass a law to deprive so large a portion of the public, who are now receiving the benefits that the use of Lobelia confers, of their rights. But should there be a final attempt to do so, I shall sound the alarm to all my friends, and we will then unitedly petition the House to expunge it. I am advised by Mr. Duncombe, to remain quiet, until we know what is likely to be done. My friends throughout the kingdom may rest assured that nothing will be wanting on my part, to meet the exigences of the case, and that we have a firm and experienced friend in the House of Commons, who will watch its every stage.

I am, my friends, as ever,
Your devoted friend,
A. I. COFFIN, M.D.

June 6th, 1857.
24, *Montague-place*, *Russell-square*.

THE NEW MEDICAL BILLS AND THE GENERAL BOARD OF HEALTH BILL.

Sir,—The medical liberties of the people are again assailed. There are now before Parliament three Medical Bills, numbered 1, 2, and 3. Of No. 2, not having seen it, I shall not speak. Numbers 1 and 3 bear the same title—"A Bill to Alter and Amend the Laws regulating the Medical Profession." There are at least eleven Acts of Parliament already "regulating" the profession. However, these new Bills appear under a misnomer. Were they what they pretend to be, we might wonder why the profession should need so much "regulating," but could have no motive to interfere in a matter not of general concernment. The sponsors of these Bills affirm that they do not in any degree trench upon private or popular rights; but, notwithstanding, they confiscate, in a measure, the right to labour—that is to live—and the right to employ—that is to purchase—needful service. As a rule, the State should not interfere between the employer and the employed, unless there be a something criminal in the relation between them, or that interference be desired by one or both of them.

Bill No. 1 enacts that a medical council, having extensive powers, be formed, with branch councils, and that every medical practitioner in the United Kingdom, having certain qualifications, shall pay certain fees and cause himself to be registered in manner provided, under pain of being treated as an unqualified practitioner liable to certain penalties. If the gentlemen of the medical profession choose to submit to such thraldom, for the benefit of a few hungry place-seekers, no one has a right to remonstrate. But the Bill further enacts (section xxxiii), that any person taking or using "any name, title, admission, or description implying that he is registered," shall be liable to certain penalties. This clause is very insidious. The word "implying" may be tortured by legal ingenuity to create a multitude of offences. For example: any person now legally entitled to call himself "surgeon," though not entitled to be registered, who, after the passing of the Act, should continue to use an appellation distinctive of his calling, might be brought within the penalties of the Act. It would be about as wise and just to punish a man for acting as and being called a carpenter, unless "legally qualified." But the clause might be made to take a wider scope. Even you, sir, might be entangled in its meshes. It would only need that some person should address a letter or packet to you, adding "surgeon" to your name, and that you should receive it. This may seem an improbability; but, judging from analogous facts, it might well happen. A gentleman lately received two accounts, one from a country tradesman, who addressed him as "Colonel," and the other from a London bookseller, who addressed him as "Reverend." Now, legal ingenuity might construe the receipt of those documents as "implying" an "admission" that the receiver was a "Reverend Colonel." But what would the tradesmen have thought and done if their letters had been returned to them marked "refused?"

Section xxxi enacts that, after a certain date, "no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine prescribed, administered, or supplied by him to his own patients, unless he shall prove upon the trial that he is registered under this Act." This clause directly confiscates the right to labour in a useful calling, and to seek remuneration for services rendered. It requires no proof of false pretences—no complaint on the part of the person served. The service may be *bonâ fide*—it may be the skilful extraction of a tooth or a corn, the setting of a broken bone, the reduction of a luxation, the stanching of a hemorrhage, the cure of a scald or a burn, attendance as a midwife, the administration of a bath, of galvanism or of mesmerism—it may extend to the saving of limb or life, perhaps when no other means of salvation were available; and yet the person benefited would be justified by law in refusing remuneration, although it might have been promised. What is this but to encourage dishonesty by Act of Parliament?

Bill No. 3 has similar provisions. Section xlii corresponds to section xxxi of Bill No. 1; section xlv corresponds to section xxxiii, but is more explicit, and directly forbids the use of the designation surgeon, except by registered persons. Section xxxv forbids the employment of unregistered practitioners, not only in any public office, but even by any "friendly or other society for affording mutual relief in sickness, infirmity, or old age;" thus again unduly interfering with the rights of the employer and the employed, while respecting those rights, as regards "any hospital, infirmary, dispensary, or lying-in-hospital," wholly supported by voluntary contributions. The corresponding section (xxxii) of Bill No. 1 goes further, and enacts that no unregistered person "shall be capable of holding any office or appointment, either by direct or indirect terms confined to legally qualified practitioners."

If, for the "legally qualified," Acts of Parliament could always give us the really qualified, there might be some excuse for legislation; but the objects of these Bills are evidently to crush all independent practitioners, and to create a number of lucrative and influential offices.

The General Board of Health Bill is entitled "A Bill for transferring the Powers of the General Board of Health to a Committee of the Privy Council." Last year, Parliament and the people having condemned the Board to extinction, in consequence of the incompetency and meddlesome and jobbing spirit which it betrayed, this is an attempt to revive and prolong it under a new name. It would be a work of supererogation, and would fill too much space, to recapitulate the failures, extravagances, and impertinences (from the Board of Health malaria at Croydon to the ruinous litigation in so many places) of this bantling of centralization and jobbery, which, having little to do for its £18,000 a year but to concoct blue-books, and only kept "alive by giving it the administration of small Acts of Parliament," after a private meeting of its officials "to consider what they should do to give an appearance of importance to their sinecures" (*Engineers and Officials, p.* 159), sought "to centre in its own hands the control of the whole local government of England and of the metropolis, including water supply, gas, funerals, and burials, and aimed at extinguishing all progress in engineering works, by forcing on all places, under all circumstances, one fixed stereotyped and empirical system" (ib., p. 227); to which may be added, the regulation of the medical profession and the forcible vaccination of the whole population. Had the Board succeeded in perpetrating these jobs, it is not improbable that it would next have demanded to regulate our daily exercise and food and clothing; and it might not have disdained to take in hand the pap-spoon and the nursing-bottle. It must be confessed there was method in the plan. It would be fitting that, being killed, we should be buried, by authority, and no doubt the great undertaking establishment would have known how to cut out work for itself. But, happily, they failed to make us "believe that the men, who have made old England what she is, live, not on bread and beef, earned by industry, but on Acts of Parliament, with the help of official commissioners; that no one is capable of taking care of himself, that every community requires the horn-book and rod of a salaried professor, like him of the Black Rod who starved the governor of Baratraria to save him from indigestion."

Having slain the monster, it behooves us to take care that he does not revive to devour us under another name.

I am, sir, your obedient servant,

JOHN GIBBS.

Maze Hill Cottage, May 20, 1857.

PERILS BY THE WAY.

(*Continued from page* 306.)

"Here have I heard the bridal vows,
In faltering accents low;
Have gazed on fair, unfurrowed brows,
Unworn by wave of woe;
Have heard the pastor's voice proclaim
The union of heart and name;
And seen her tears o'erflow,
Who saw the strange, new path untried,
And feared, yet joyed, to be a bride."

During those happy years which we have reviewed with so much rapidity, what letters were received by that widowed mother to whom we listened at the commencement of this narrative! And how often did she feel the truth of the inspired proverb, "As cold waters to a thirsty soul, so is good news from a far country;" for what could bring such sweet relief, or prove so cheering to her anxious mind, as the intelligence that a gracious Providence had watched over her youthful and unprotected son—had given him favour among strangers—had opened a way to their hearts and homes—had preserved him in his new and untried sphere; yea, more, that he had made a profession of faith in Christ, had been welcomed to the fellowship of the church, and had laboured with great acceptance and encouraging success in the blessed cause of truth and righteousness? This had occasioned her more tears of joy than all beside. How frequently was she heard to say, "None but a God-fearing mother in similar circumstances can understand my bliss!"

As years rolled on, Edwin's growing intelligence, his activity and uprightness in his secular duties, and his practical consistency in his sacred profession, raised him still higher in the estimation of his employer, insomuch that he was requested to take a more prominent part

in the business of her establishment; indeed, he was consulted in all matters of more than ordinary moment, and his suggestions were carried out with the utmost confidence.

About this time an event took place, which forms a very important feature in Edwin's history. Mrs. G. was visited by a pious niece, in whose societyhe found a new source of pure and intellectual enjoyment. Emily C. was interesting, well informed, and amiable: not showy, but distinguished by those sterling virtues which give weight and influence to character, and minister so largely to the happiness of domestic life. Edwin's humble origin was no secret, nor was it an obstacle to his advancement. It was manifest to all that, with his present attainments and principles and habits, he must continue to rise in respectability and influence. Like a majestic vessel, with its canvass spread to the favouring breezes, and its course directed by true nautical skill, he had every prospect of a safe and pleasant voyage. Mrs. G. observed a growing attachment between the young people; and having entire confidence in Edwin's integrity, so far from feeling any objection, she promised to use all her influence in making him a happy and prosperous man. She did so. Emily's parents consented to the union, and in due time the necessary arrangements were completed. The auspicious day arrived; and the bright sun shed his golden beams upon the happy pair as they entered the temple of God, and, standing before his presence, made their solemn vows. What sympathies gathered around them! and what prayers were presented to Heaven on their behalf! As they passed from the sanctuary, every heart seemed to say, "God be gracious to these plighted ones; protect them from rude winds and angry storms, and let their domestic bower ever be the scene of joys pure and lovely and fadeless as the flowers of Paradise!

"Hail, wedded pair! be yours the bliss
To live in harmony and love;
And when this world with you shall cease,
May purer joys be yours above!"

We are now briefly to trace Edwin's history in a new social relation, which necessarily involves a new class of obligations and cares—of joys and sorrows—a relation the ties of which are at once the most intimate, delightful, and enduring. As a husband, his domestic enjoyments take a higher and wider range, and with his responsibilities proportionably increase. But he has not to bear those responsibilities alone; for in the wife of his youth he has found a cheerful, kindred spirit, whose meekness of wisdom, gentle persuasiveness, and unyielding faith and patience, have fully justified his confidence, and proved her well qualified to maintain her influence over his affections, to share his burdens, relieve his anxieties, and enhance his bliss.

Their first solemn act was to erect a family altar, upon which, as the seasons returned, they duly offered the morning and evening sacrifice, rendering thanksgiving and praise, and seeking guidance and help and blessing from Him—

"Whose mercy visits every house
That pay their night and morning vows."

Oh! it is sad when those who profess and call themselves Christians in the church are seen to act like atheists at home, when, in the presence of their children and dependants, they practically deny the existence of Jehovah, by neglecting to bow before his footstool, and by refusing to "*render unto him the glory due unto his name.*" We ought to know that He who claims our devotion in the seclusion of the closet, and amid the great congregation in the temple, also demands our homage in the home circle, and has threatened to "*pour out his fury upon the families that call not upon his name.*" If the heathen have their household gods and their domestic worship, what shall be said of those who profess to know the living and true God, yet honour him not in their dwellings? Let every one who is at the head of a house distinctly understand that there is an amount of authority and influence, peculiar to that station, which ought to be employed for the divine glory and the good of those who compose the household, and for which an account must be rendered to the great Master in heaven.

There were also public religious duties which engaged the attention of Edwin and Emily, especially—efforts on behalf of the neighbourhood in which they

dwelt; such as domiciliary visitation, the circulation of the sacred Scriptures and religious tracts, &c. But time would fail to describe fully the purposes formed for the regulation of their future course, and the various plans of usefulness devised and carried into effect; for they were evidently determined to be "fellow helpers to the truth," and to share largely in the luxury of doing good. In these labours of love they were much assisted and cheered by Mrs. G., who, as we have seen, was a Christian of no ordinary growth, and whose loving spirit melted with compassion towards the unsaved, while her gentle voice was ever ready to utter an appeal on their behalf, and to speak words of counsel and encouragement to any who were earnestly attempting to *pluck the brands out of the burning.* How susceptible we are of each other's influence! and if it be true that "influence follows character as faithfully as the shadow follows the sun," how important it is that the friends of the Redeemer, and more especially those of long standing and experience, should zealously endeavour, by their example and advice, not only to strengthen those who *are* labouring in his blessed cause, but also to "*provoke*" all fellow members to "*love and good works!*" If the enemies of the cross of Christ are employing all their influence in an opposite direction, can any of its true friends neglect this momentous branch of Christian duty? Let us, then, "*stir up each other's minds by way of remembrance, and exhort one another daily, and so much the more as we see the day approaching.*"

The season of gloom and darkness is past; the days are lengthening; the boisterous winds, the biting frosts, the driving snow, and the pelting hail, like a retreating army, have given place to milder and more genial influences; for—

"The south wind's breath, at God's behest,
Dissolves stern winter's reign;
And spring, in all its beauties drest,
Revisits earth again."

The meadows, orchards, and gardens are clothing themselves afresh in their loveliest attire; the bee is on the wing, humming her grateful hymn of praise as she gathers her delicious food from gay blossoms in each scented bower; the lambs are sporting in their innocence, and the time of the singing birds is come; yea, even the smutty sparrows upon the housetop are revelling in the merry sunshine, which at this season breaks through the murky atmosphere of the metropolis;—all nature is prepared to shout aloud in triumph. And there is joy in Edwin's home—a joy before unknown. The appearance of a little stranger—a young immortal—the first fair pledge of virtuous affection—has shed an unwonted brightness over that peaceful abode. What wonderful emotions has that tiny helpless one unconsciously awakened! What deep, gushing springs of love, sympathy, and solicitude has it opened! And what weighty thoughts of responsibility now mingle with the delicious joy of those who are seen bending with inimitable tenderness over the precious treasure! Ah! dear little voyager, thy frail bark has been lanched upon a changeful and perilous ocean. Thou hast started with a soft and propitious gale, and beneath sunny skies; hope smiles around thee, and fervent desires are breathed to heaven on thy behalf; but how little is known of the vicissitudes that await thee! God speed thee, and grant that, whether thy passage be brief or protracted, peaceful or tempestuous, it may be safe and prosperous in the end! Edwin's home had hitherto been much endeared to him by the presence of one whose cheering sympathies and sweetness of disposition and manners constantly maintained a joyous tone of peaceful serenity within the sphere in which she moved, but now it has an additional attraction, a new connecting link. The fond father smiles upon his first-born, and in his warm heart blesses her who bears the precious, the beloved name of mother.

"How beautiful she looked, as o'er her child
The youthful matron bent with tender care,
While the unconscious cherub's features smiled
Reflecting back its mother's graces there.
How beautiful she looked, how more than earthly fair!

"How more than beautiful doth beauty seem!
What holier garb can woman's graces wear?
Not Eve, when bending o'er her mirror stream
In native innocence, could look more fair
Than the young matron looks tending her infant care."

(To be continued.)

STATISTICS OF MEDICAL BOTANY.

(Continued from page 359.)

Name and Residence.	*Age.*	*Ailments.*	*Previous Medical Attendants.*	*When com. Botan. Treat.*
Mr. J. Clemmens, 154, High-st., Shadwell, and Down's-buildgs. Richmond.	23	Indigestion, said to be in a decline.	Several physicians.	March, 1857.

This young man lived in a nobleman's family, but was obliged to leave from ill health; he had the advice of the family and other eminent physicians, but continuing to get worse, went to St. George's Hospital, where he remained a month—was then induced to try Medical Botany. He had a constant pain in the chest, with all the symptoms of debility that attend this distressing complaint. I gave him the medicine for indigestion, with liver, Indian, and nerve pills. He took the medicine about three weeks, and called to thank me, quite well, and on his way to a situation at Richmond.

Mr. W. Cape, 7, Plumber's-row, City Road, & 20, Haberdasher-st., Hoxton.	40	Indigestion, similar case to the above.	Ten medical men.	

In describing this case, I think I cannot do better than give an extract from the patient's letter he writes 13th May, 1857: "I can assure you I had been suffering from this disease between four and five years, and consulted many eminent medical men: they all treated me differently. I went once to Scotland by sea, and, until I accidentally heard of you, obtained no relief. When I first consulted you, I was suffering much from constant pain in the chest, with great debility. The cure, however, was so quick, it surprised and delighted myself and friends. After taking your medicine a fortnight (for indigestion, as per 'Guide,' J. S.), I had two vapour-baths and one lobelia emetic, and from that time, January, 1855, to the present, *my health was never better.* I sincerely thank you. I think I have told hundreds of it, and will, if spared, tell thousands. Perhaps there will be some who doubt this statement, *and no wonder*, for the age we live in is one of sham, show and falsehood. Go on, and truth will prevail. Glad should I be if any inquirer would call on me. Give my kind regards to Dr. COFFIN." Perhaps two cases so striking and so similar could rarely be selected. I have cured several patients recommended by Mr. Cape, who is, in every other way, a perfect stranger to me.—J. S.

Mr. Corfe and two children, 4, Bridge-street, Homerton.	1 and 10	Mr. C., inflammatory sore throat; children, inflammation of the lungs.	Botanic treatment.	1856.

Mrs. Corfe generally prescribes for her family (see Journal 133, page 300, vol. 4), but the inflammation increasing, I advised more active treatment. The baby was cured in a week, and the elder child in a month. Mr. Corfe's was a very malignant attack—he could scarcely follow. With the vapour-bath, gargle and liniment, it was quickly subdued. I had only to attend him twice.

Mr. Farrow, 4, Sun Tavern Gap, Shadwell.	40	Quinsy.	Botanic treatment.	1856.

This was a very acute attack—the patient could hardly speak or swallow. The same treatment as the previous case was adopted, with the addition of lobelia emetics, and the cure was so quick (two days) that the patient and family were astonished.

I think I have now given sufficient evidence to prove that the unlicensed botanical practitioner, although not educated according to the medical schools, can cure diseases which the licensed practioners, however eminent, have failed to cure. Hoping you will be supplied with a good array of similar statistics from other agents, and thanking you for affording me so much space, I remain, dear Sir,

Yours very truly,

JOHN STEPHENS.

GARDEN FLOWERS OF MAY.

(Continued from page 347.)

We have several other species in the garden, resembling the common kind both in scent and appearance. They are chiefly North American shrubs. Those called the myrtle-leaved and sweet syringa, are both natives of the thickets of New Zealand. The young shoots of one of them were made into a tea by the sailors of Captain Cook's crew, and the infusion taken as a remedy for some of those complaints engendered by long voyages. It was, while fresh, very pleasant to the taste. The dwarf variety of the mock orange has been found in Carolina.

The garden persicaria *(polygonum orientale)* is a common flower, with its spike of dark red blooms. From its bearing so well the smoke of cities, it is often called London persicaria. It was brought originally from the garden of the monks of Mount Ararat, where it is cultivated, not only as an ornament to the parterre, but also for its medicinal properties. One or two species of this plant are sown in China for dying cloth of a beautiful blue or green colour. Another species yields a yellow dye, and one of the strongest astringents of the vegetable kingdom is yielded by some plants of this genus. The roots of several kinds are eaten in Lapland and Tartary; and about the neighbourhood of Manchester the young leaves and shoots of one wild species, termed patience dock, are boiled and eaten as food.

The dark blue flowers of the common monkshood *(aconitum napellus)* ought not to be welcomed in the garden, as persons unacquainted with their properties frequently bind them up with the nosegay, and their scent is very deleterious. Linnæus says that the leaves are fatal to many animals, and mentions the case of their poison, recorded in the Stockholm Acts, in which a surgeon, little acquainted with the nature of plants, prescribed the use of this as a medicine to a patient. The invalid refused to take it, and the medical adviser, in order to convince his patient of the safety of the remedy, took them himself, and fell a victim to his experiment. Orfila states that the juice of the leaves occasions death in a very short time; and the root of the plant is still more powerful; while instances are on record, in which long fainting fits have been the result of merely smelling the flower. It would be well if this poisonous plant were quite banished from the garden, but gardeners should certainly be careful not to throw it with other refuse, from the ground into the public road, as the lives of children are often thus endangered. This flower was formerly called purple helmet flower. The English name of wolfsbane is given to some of the genus. They grow on the lofty pastures of the Swiss mountains, as well as on many other mountainous regions of Europe and North America. The roots, when pounded, are mixed with food to form bait for wolves and other animals. The yellow monkshood *(aconitum anthora)* is a more ornamental flower than the purple kind, and a very pretty species; the hairy wolfsbane *(aconitum barbatum)*, with pale yellow flowers, a native of Siberia, is a frequent flower of the garden border.

The aconites are regarded as a highly poisonous tribe of plants, but no other species, not even the purple monkshood, can be compared for its virulence to an Indian kind *(aconitum ferox)*. The root of this is the celebrated substance called *bikh*, or *bish*, and is a poison of the most deadly nature. The great yellow aconite *(aconitum lycoctonum)*, which grows wild on the Alps, and is very common in Lapland, is said by Linnæus to be boiled and eaten as greens in that country, but it cannot be recommended. It grows in some districts of Lapland, he tells us, in his "Flora Lapponica," as commonly as heath or ling. It is called by the Laplanders *giske*, and not being eaten by any kind of cattle, it thrives luxuriantly, and increases in proportion as other herbs are devoured. The wife of a clergyman of Lulea, on whose accuracy the great botanist says he could place the greatest dependence, assured him that at a post-house where she dined, she saw great quantities of this aconite collected and brought to table cooked as greens. As she knew the plant to be used as a poison to flies, she expressed some surprise

that it should be eaten. The maid-servant of the house, however, laughed at her fears, and told her it was too good to be slighted.

Many very pretty species of stellaria, some of them much like our common stitchwort, adorn the garden beds at this season, and by their profusion of starry white flowers cover the stones of the rockwork.

The rose acacia *(robinia hispida rosea)* is now profusely flowering, and its long blushing wreaths of flowers droop from among its light sprays of leaves, rendering it a truly graceful shrub. By persons unacquainted with flowers, it is commonly called pink laburnum, as its blossoms are formed like those of that tree. Its roots require much room, so that it is an inconvenient plant for a small plot, but no large garden should be without its beauty. It is a native of Carolina.

Several other beautiful species of the plant called acacia are to be found in the garden, while the locust-tree, or false acacia *(robinia pseudacacia)*, is very general, and lends its shadow to the lawn, or hangs its pendent blossoms in the shrubbery. Some of the Jesuit missionaries gave to this plant its name of locust-tree, from the mistaken idea that its seeds were alluded to in Scripture, where the forerunner of the Messiah is described as eating locusts and wild honey. Its flowers are generally either white or tinged with pink and purple, but it is one of those trees which remain the longest in spring, waiting to be clothed with the verdant foliage; and this, as well as the very brittle nature of its branches, which snap and break away in the high winds of spring, is a great disadvantage to its beauty. With us it is more commonly a low than a very high tree, but in the North American woods its branches reach the height of a hundred feet. It grows well in the neighbourhood of London, and is, with the lilac and the laburnum, among the commonest flowering trees in the gardens of the villages around the metropolis. It is one of the first trees which reached us from the American forests, and it has always been valued there for its hard and durable wood. Cattle are very fond of the young shoots, and some botanists have recommended the culture of the plant for forage. Their nutriment is owing to a saccharine principle, which exists also in the roots. With us its flowers are ornamental, and very pleasing by their fragrance, while the natives of St. Domingo make from them a distilled liquor, said to have a very agreeable flavour.

The false acacia has so long been termed acacia, that it is often confounded with the true plants of that name, which, however, are very different in appearance. These latter flowers are called in Australia by the general name of wattles. More than three hundred kinds have been introduced into England, but few species remain in culture. The greater number of these are natives of New Holland; they are nearly all evergreens, and their flowers are little yellow balls or tufts, like down. The gum arabic of commerce is derived from the acacia vera, a plant found in every part of Africa. In our country they nearly all require to be treated as greenhouse plants, and several are commonly planted in pots and kept in rooms. The author of "The Picture of Australia" remarks, that the acacias in all their varieties are very elegant, and says, that "they are among the few plants in the Australian forest which an European would be disposed to consider ornamental. There are more than one hundred species scattered over Australia, and of these a considerable number belong to the leaflesss kind. Their flowers are very beautiful, and the leafless variety is probably not found in any other part of the world."

Some pretty species of the flower called lousewort, are now opening in gardens, but they mostly require considerable care in their culture. Their leaves are cut into fine segments like those of our wild kinds; and their flowers are chiefly pink or purple, but sometimes yellow. When the white, red, and yellow colours mingle in their blossoms, they are said by Loudon to give to the flower the tints of flames of fire. They generally grow on very elevated situations, and are found more than a thousand toises above the level of the sea. Notwithstanding their acridity, the mountain goats browse on them in the pastures where they are plentiful. One species of this plant will not grow in the English

garden, though some pains have been taken to raise it from seeds sent from the north of Europe to the botanic garden of Cambridge. It was a flower which much interested Linnæus and other Swedish botanists. This is the flower called Charles's sceptre *(pedicularis sceptrum Carolinum)*, a name given to it by Rudbeck, in 1697, in honour of Charles XII of Sweden. This monarch having visited Tornea to observe the appearance of the solstitial sun above the horizon at midnight, was so struck with the beauty of the plant, that he carried it about in his hand. Its large golden flowers, with ruby lips, are described as rising in tiers one above another, to the height of four or five feet from the ground. It is abundant in Norway, and found in Lapland, though less luxuriant in the latter country.

By the latter end of this month, one of the gayest of our garden flowers, the escholtzia, is expanding its large yellow or orange-coloured upright bells. It was, at its first introduction into this country, called Californian poppy. This flower is, among several others, included by gardeners in the name of Californian annuals, and they were brought from California, on the north-west of America. Many of them were sent home by the indefatigable botanical collector, Douglas, who was sent out by the Horticultural Society of London, and who, in the enthusiastic pursuit of his object, lost his life by falling into a bull-pit. The escholtzia has pale sea-green leaves, covered with a fine bloom; and the flowers are very brilliant, though destitute of fragrance. When the blossom opens, the calyx, or flower-cup, instead of gradually unfolding at the summit, like the calyxes of flowers in general, separates at its base from the flower, and comes off in the form of an extinguisher. This is one of the most hardy of the Californian annuals; for though these flowers bear the open air of our winters well, yet they are generally liable to be injured by the heat of our summers; and if by any accident their roots become exposed to the sun, they will often die in the course of a few hours.

All authority over others is a talent with which we are entrusted, and, from the nature of the relation, this is emphatically true of the head of a family.

LEGISLATIVE INTERFERENCE WITH THE PRACTICE OF MEDICINE.

THERE are many subjects which legitimately demand the attention and legislation of the Parliament; but there are others which do not come within their sphere; and among these are medicine and religion. No Acts of Parliament ever did any good to religion: it has always been most prosperous when it has had to stand on its own merits. The people will choose who shall be their spiritual instructors, and they will, despite all Acts of Parliament, choose their own medical advisers. They do exercise their common sense, and make their selection of one out of the many systems which seek their suffrages. And though the legislature in times past has done its utmost to force allopathy on the people, and continues still to uphold it, to the prejudice of every other system, yet never had homœopathy, hydropathy, and Medical Botany so many flourishing establishments in the country, and so many zealous adherents and advocates. We are fully aware that it is said, "It is the duty of the government to do all in their power to protect the lives and property of the people of these realms." We admit this postulate, but we demur to the sequence, that therefore it is the duty of the government to interfere with the individual liberty of the subject, by putting him under the surveillance of any class of medical men, particularly when that class has given no evidence of its competence to arrest disease and promote health. All we ask of the government is to let medical science and medical practice stand on their own merits; and we mean by this, that if government would proffer its patronage to Medical Botany, we would respectfully decline it, under the full conviction that our system has inherent merits sufficient to secure the entire confidence and adoption of all who will examine it and its results, and that we would hold all adhesion to it worthless, if it were produced by the compulsory power of legal enactments. But some one will say, "the numerous cases of poisoning which have recently come to light, demand legislative interference." True, but should

it not be inquired, "In connection with what system?" Must not every candid observer answer, "In connection with the very system about which the legislature has busied itself the most, the system government has most petted and patronised." No case of poisoning has been proved against those systems government has endeavoured to suppress. We go further, and our observations justify us in putting another inquiry, and that is, "Are there not hundreds of cases of poisoning in connection with the allopathic system which have never been brought to light? Illegible prescriptions, chemists' or apothecaries' blunders, and excessive doses may partially answer this question; and acetate of lead, antimony, and mercury, will finish the answer. Strychnine and prussic acid will add their testimony. These, and all other deadly poisons employed by allopaths, are administered profusely, and sold, in many instances, without restriction. What, then, can be said for the government protecting the lives of the people, while they allow a certain class of men to administer these poisons to whomsoever they will, and in quantities *ad libitum?*

A Bill is now before the Legislature for prohibiting the sale of poisons. In this, as in all Bills pertaining to medicine and medical practice, it is supposed that the framers of the Bill had been guided by the advice of medical men. Among the vegetable poisons set forth in the said Bill, we find *Lobelia Inflata.* The men who suggested that this herb should be placed in the category of poisons have put themselves on the horns of a dilemma, and they may be impaled on the one which they prefer. Either they call Lobelia a poison because they are ignorant of its medicinal properties, and, therefore, were intellectually incompetent to advise on so important a subject as that of toxicology; or, knowing its qualities and its effects in relation to certain forms of disease, they wilfully desired to prevent other parties from becoming acquainted with its restorative properties, and therefore placed it amongst poisons: in this case they were guilty of an attempt to deceive, and were morally unfit for the office they assumed. We do not determine on which horn of the dilemma they are impaled, but we are compelled to think that no one who has a sound mind and inclination to study, can be ignorant of the medicinal properties of Lobelia. So far from Lobelia being a poison, it is the most efficient antidote to poison: it was the means of restoring a man to life after he had taken a dose of arsenic sufficient to kill three men. But we shall refer to this again in the illustrations we shall give of the effects we have witnessed resulting from the free use of Lobelia. In the year 1849, some papers appeared in this Journal, so appropriate to the present crisis, that we introduce them to the notice of our present readers: —

"The course recently pursued by the medical profession in their opposition to the use of this most invaluable plant, and the effect produced by that opposition upon the minds of many, makes it necessary that we who have introduced it to the people of Great Britain, should, in some respects, reply to the calumnies heaped upon it. We are, however, of opinion that the opposition raised against Lobelia, is more in consequence of fear resting upon their minds of our ultimate success, than from any thing they either know or fear of its properties. Some two or three years ago, cayenne pepper was a baneful thing, and burnt up the stomachs of our patients, but when they saw that cry would not do, then comes the bugbear against Lobelia, as though they themselves never used poison!

"Whilst they use and recommend the good properties of the following articles, in their own Materia Medica, viz:—

Arsenic.
Acids,—Prussic, Oxalic, Sulphuric, Iodic, Nitric, Acetic, Muriatic, Phosphoric, Boracic, Citric, Oxymuriatic, Carbonic.
Alcohol.
Algaroth powder.
Ammonia.
Ammonio-chloride of Mercury.
Antimony, tartarized
——— chloride of,
Acetate of Lead, Copper. Mercury, Zinc, Morphia.
Balsam of Copaiba.
Barium, chloride of
Battley's Sedative solution.
Belladonna.
Bismuth.
Black Hellebore.
Black oxide of Mercury.
Blue Pill.
Blue Stone.
Blue Vitriol.
Bryony.
Calomel.
Camphor.
Cantharides.
Carbonate of Baryta, Lead, Copper, Zinc.
Castor oil seeds.
Cephælis Ipecacuanha.
Chloride of Lead, Antimony, Zinc, Tin, Gold.
Cicuta.
Colocynth.
Copper, all its medicinal preparations.

Copperas, white and green.
Corrosive sublimate.
Croton oil.
Dalby's carminative.
Datura Stramonium.
Deadly Nightshade.
Digitalis purpurea.
Dippel Oil.
Epsom Salts.
Ergot of Rye.
Ether.
Fusil Oil.
Gamboge.
Godfrey's cordial.
Goulard's extract.
Guiacum powder.
Hartshorn, spirits of
Hemlock.
Henbane.
Iodine.
Jalap.
Laudanum.
Lead, all the preparations of.
Levant nut, or Coculus Indicus.
Mercury, bichloride, chloride, ammonio, red oxide, sulphate, nitrate, acetate, fulminate of.
Morphia.
Naphtha.
Nightshade, woody
———, garden.
Nitrate of Potash.
Nux vomica.
Oil of Savine, Tar, Turpentine.
Opium.
Oxide of Antimony, Copper, Iron, Zinc, Lead.
Potash, and its carbonates.
Sal ammonia.
Sal prunella.
Sal polychrest.
Sal volatile.
Saltpetre.
Savin.
Scammony.
Soda and its carbonates.
Squill.
Syrup of Poppies.
Thornapple.
Throatwort.
Trisnitrate of Bismuth.
Wartweed.
Water Crowfoot,
Water Laurel.
Water Hemlock.
Water Parsnip.

and a large number of others—whilst they use, as we have before said, and recommend the good effects of the above poisons, are they not willing that us Botanists should have ONE, *one*, *little*, solitary poison? and that too, one they themselves recommend as being good to cure disease; a remedy that Hooper in his Medical Dictionary, says, 'it (Lobelia) has been found *very useful in some cases of asthma, and the air-passages*,' page 851. Now, all that the faculty know against Lobelia is taken from a *Law Reporter* of Massachusetts, at the trial of Samuel Thomson, who it was said had killed a young man with it, for which Thomson was arrested *two years after*, and put upon his trial, on the testimony of one Dr. French (see Beck's Medical Jurisprudence, 7th edition, page 953): he was acquitted, but then the testimony was put down, whether *true or false;* it was afterwards quoted by Dr. Thatcher, and has been the authority on which are grounded all the ideas of it since, except a few who have ventured to try, every one of whom finds the statement made in their books false. As we said in a former article, we have used it for thirty years in all the forms of disease to which man is subject.

"Although in some cases its operation seems severe, and sometimes the friends and patient are alarmed at its action, yet in thirty years we have never seen one instance where it has done injury. For several years of that time we have had charge of an infirmary, to which patients were brought from all parts of the country, the most of them given up as incurable by their former attendants, and a large portion of whom were afflicted with pulmonary consumption in its last stages; we gave freely of Lobelia, and under those circumstances *not one was injured!* As we remarked above, we have seen it operate very severely, we have seen patients lay and sob (as a child that had been whipped) for fourteen, and in one case, for twenty-two hours, but as soon as it was over, they rose, eat, and returned to the business of life. But let us analyze its poisonous properties; now we would ask the faculty whether any of the above-named poisons that they use and recommend, if taken in an overdose, would save their patient if they gave him another dose of it, or of another kind; suppose a man had taken prussic acid sufficient to kill two or three men, would a dose of arsenic cure him?—If he had taken a dose of arsenic, would a dose of opium cure him? The answer is NO, *most certainly not!* And why? *Because the dose and the antidote are both poisons!* Not so with Lobelia: we have given it in tablespoonful doses to a patient who had taken arsenic enough to kill several men, or 120 grains, and when the patient was insensible; we restored him to life! We have given Lobelia to a child that had taken sixty drops of laudanum through a mistake, and seemed to be in the last stage of existence; and restored it to life. We have given Lobelia to a child that had eaten the green leaves of the *Datura Stramonium*, and restored it to life. We have seen the Indian cure the bite of the most poisonous reptiles, by giving large doses of Lobelia; would any of the poisons we have enumerated, saved the above cases? Most emphatically, no! Cease then, ye members of the profession, to speak upon a subject of which you are totally ignorant,—cease to proclaim to thousands and tens of thousands of the

people of England what under the instructions we have given them, *you know to be false;*—cease to make yourselves thus ridiculous, and come and investigate our theory, if it be true embrace it, and assist us in the heaven-emanating work of drying up the sources of sorrow, of wiping away the tears of the fond mother's cheek, and raising the desponding hopes of the dying. Do not, gentlemen, pass it off by saying, "*O! he is only a quack!*" the time for this plea is past. We have as many claims to be respected as any among you, having practised prior to 1815, and graduated at a respectable College of Physicians and Surgeons, and can bring not only to our aid between thirty and forty years' experience; but tens of thousands of evidences of the success and superiority of our system over the one you so tenaciously adhere to;—therefore, do not, on any account, delay the investigation we court, and shall not shrink from the most scrutinising enquiry.

"Having exposed the folly and inconsistency of the faculty, in condemning Lobelia, on account of its *assumed* poisonous nature; showing also if it were a poison it possessed greater remedial properties than any of the 200 poisons in their pharmacopœia, our present object is to treat of its growth.

"The Lobelia Inflata is a biennial plant, usually from 12 to 18 inches high, with a fibrous root, and a very hairy, solitary, erect, and angular stem, much branched about two-thirds of the way, rising considerably above the summit of the branches. The leaves are scattered, sessile, acute, serrate, oval and hairy. The flowers are dispersed in numerous leafy terminal racemes, and supported on short footstalks. The segments of the calyx are linear and pointed. The flower, which is of a delicate bluish colour, has a border labiate, the upper lip being divided into two, and the lower into three acute segments. The pod is an oval, inflated capsule crowned with the persistent calyx, and containing in two cells numerous very small brown seeds.

"Its flowers appear toward the end of July, and continue to expand in succession until the occurrence of frost. When wounded or broken, the plant exudes a milky juice, possessing active emetic properties. The plant should be collected in August or September, when the capsules have become a little yellow. The seed is then ripe.

"All parts of the plant are possessed of medicinal activity; but the seeds, leaves and inflated capsules, are all that are used as medicine in our practice.

"The Lobelia Inflata is a native of America, and grows wild in all varieties of climate in that vast continent. And although botanists have stated in their books, that it is an annual plant, yet it is a biennial or of two years' growth. About the year 1833, we pointed it out to Professor Amos Eaton, author of the 'Manual of Botany for North America:' this error he generously gave us credit for in his next edition, by saying, 'this plant has hitherto been considered an annual plant, the error has been shown by Dr. Coffin of Troy.'

"The question has often been asked, whether the plant will grow in this country. We have seen some very fine specimens, reared in the neighbourhood of Halifax, and we believe it will grow equally as well in any other part of these dominions. It requires neither training or looking after; abundance of earth is however necessary, but in every other respect it is a wild plant."

NOTICES.

Dr. COFFIN may be consulted gratis, as usual, every Saturday evening, from four to eight o'clock, at the Botanic Establishment, No. 24, Union-street, East, Spitalfields. *Patients not admitted to the waiting-room after eight o'clock.*

Dr. COFFIN may also be consulted at his residence, 24, Montague Place, Russell-square, daily *(Sundays excepted)*, from one to two o'clock (fee one guinea), on any day except Monday, on which day the fee will be five shillings only.

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POST-OFFICE ORDERS and all communications for goods, &c., to be addressed to William B. Ford, 134, High Holborn.

The Botanical Journal and Medical Reformer is published Fortnightly, at No. 134, High Holborn, London, where all orders must be addressed.

COFFIN'S
BOTANICAL JOURNAL
AND
MEDICAL REFORMER.

"Human experience, which is constantly contradicting theory, is the great test of truth."—Dr. Johnson.

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MEDICAL LEGISLATION.

The two Bills for the regulation of the medical profession now before Parliament have not received the attention from the public which their high importance merits. It is a gross blunder to imagine, as many, however, do, that they concern the faculty exclusively, or at all events much more than the public in general. It is we who are most interested in the question; it is we who suffer by the errors and ignorance of the professors of the healing art; and we are most concerned that the Legislature shall defend us from being practised on by quacks and empirics.

But we are also concerned that there shall be no proscription of medical doctrines, no erection of a despotic medical board who shall practically assume infallibility and refuse diplomas to those who teach new systems or vary from the established practice. The *odium theologicum* is, no doubt, the bitterest of all the passions which disgrace the human heart, but the gentle healing art is sometimes discredited by the narrow-mindedness and intolerance of its votaries. The two greatest lights of medical science, Harvey and Jenner, were insulted by their own craft, and narrowly escaped being hounded out of the profession. Sydenham and Mason Good were rejected by the College of Physicians. Fellowships are given by favour, and the colleges (as the evidence before Parliament teaches us) are managed in the secret and irresponsible manner of clubs. Let us, however, while rectifying these abuses, and giving a new position and more definite standing to the medical man, take care not to overshoot the mark, and arm him with a scourge over us. Let not the orthodox or allopathic practitioner enjoy a monopoly to the exclusion of the water doctor or the homœopath. We want more medical science, but we want no Medical Inquisition which shall refuse diplomas and registration to all who differ from the established practice.

How stands the case at present? The profession is totally disorganised, and is naturally anxious to be reconstituted. There are no less than nineteen licensing bodies, and no two of them have the same standard of qualification, or the same curriculum of study. They rather run a race which shall make the obtainment of a diploma the easiest. Every rejection of a candidate is a pecuniary loss. The public have not the slightest knowledge what amount of medical or surgical science is indicated by the different degrees with the attached letters. The high standard of a few of these licensing bodies is rendered useless by the slippery and mercenary easiness of the remainder. On the principle that the strength of a beam is its weakest part, so here the unscrupulous colleges, which on the many depress the general body to their own low level. An ignorant or dull student easily finds a college which cares more for fees than qualification, the public neither knowing nor caring where he gets his licence. It is high time that this chaotic state—where system there is none—should be swept away, and that there should be one Licensing College or Medical Council

for the United Kingdom—with, of course, branch boards to conduct the examinations in distant localities, but amenable to and acting under the rules of the supreme board, so that the qualifications for the testimonials may be uniform throughout the kingdom.

So far the two Bills, one of Mr. Headlam and the other of Lord Elcho, agree; but they differ widely as to the constitution of the General Council. Mr. Headlam's Bill is the favourite of the colleges and the close medical bodies, and that makes us suspect that it will be worse for the public. Be it remembered too, that the general body of practitioners detest the two London Colleges of Physicians and Surgeons, and with reason, for they know them by long experience to be narrow, jealous, and exclusive corporations. An examination of Mr. Headlam's Bill confirms our suspicions. According to it, the General Council shall consist of twenty-three persons, seventeen of whom are to be chosen by the present close medical corporations, and only *six* are to be nominated by Government—that trustee for the public. According to Lord Elcho's Bill, the General Council will consist of thirteen persons—all appointed by the Crown, the President of the Board of Health being one of them. Mr. Headlam's Bill gives an entire ascendancy to the colleges—those close, jealous, and self-seeking bodies; whereas Lord Elcho's Bill gives the entire nomination to the Crown, with the further proviso that four of the number need not be medical men at all. This infusion of the lay element is a wholesome check against that narrowness and pedantry which more or less beset all professions. We would much rather trust the Government than the colleges, for the public health is quite out of the domain of politics; and whatever may be the complexion of the ministry, we need not fear the infusion of any party feeling in the nomination of the General Council.

According to both Bills, the Council is invested with absolute power over medical education throughout the three kingdoms; it is to prescribe the course of study and appoint the examiners, and no one who practises without their certificate or diploma can recover in a court of law for medicine or attendance. What if the scheme of examination is such that no medical heretic—hydropathist, mesmerist, or homœpath—shall be able to go through the ordeal? Let the public look to this in time. This is not a scientific journal, and we profess no medical opinions. But we do demand that we be allowed to choose our doctors for ourselves, and that no despotic tribunal shall be erected which may establish a medical orthodoxy, and subject all who refuse to conform to it to the pains and penalties, to the insults and exclusion, of medical heresy. Assuredly the established or orthodox practice is not so brilliantly successful—the most eminent of the faculty themselves being judges—that any board, no matter how constituted, should be entrusted with the power of refusing degrees or registration to any professor of doctrines which they dislike or desire to silence. We are glad to find a clause in Mr. Headlam's present Bill which was not in his last. The 34th clause provides that "the name of no person shall be erased from the register on the ground of his adoption of any theory in the practice of medicine or surgery." This is satisfactory enough in regard to a name once on the register, but we desire some security that neither shall the adoption of any theory operate against the obtaining a diploma and the consequent insertion of a name on the Register. We require security for the future as well as the past. Let a similar clause, therefore, be introduced in regard to future admissions.

The Examining Board have a right to ascertain that the candidate has a full knowledge of what we will call the orthodox practice, but they have no right to bind him not to adopt a different one. The practice of medicine has been greatly modified of late years, and it is still in a state of transition. Science is not to be stereotyped and prevented from making further advances. The recently published work of that eminent physician, Sir John Forbes, testifies to the uncertainty of the art, as well as to the widely diffused want of confidence in its resources. New methods of cure have been introduced of late years: the public have a right to form their own estimate of these new methods. They

will think for themselves. And there is nothing which would more surely make the water-cure and homœopathy to flourish—be they quackeries or be they true science—than an attempted proscription of them by the hand of power.—*Morning Star.*

REPEAL OF THE COMPULSORY VACCINATION ACT.

To the Editor of the Botanical Journal.

Dear Sir,—The honourable and worthy member for Finsbury having brought in a Bill to repeal the Compulsory Vaccination Act of 1853, there is *just time* to rouse all the agents to petition for its repeal.

The second reading is down for the 1st July; therefore, if all who are interested —*and all ought to be*—will obtain a sheet of foolscap, copy the petition, and get all the adults in their own households to sign it, and others, if time would permit, and forward before the 1st July for presentation to their own members, they would be doing good service to Mr. Duncombe, whom we are all bound to support on this occasion.

Hoping you will insert a short form of petition,

I am, dear Sir,
Yours truly,
JOHN STEPHENS.

In accordance with the suggestion of our correspondent, Mr. Stephens, we have drawn up the following copy of a petition:—

FORM OF PETITION.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

The humble petition of the undersigned inhabitants of ———*, in the County of ———,

Sheweth—

That since, in the seventeenth year of Her Gracious Majesty Queen Victoria, a Bill passed your Honourable House, entitled, "An Act further to extend and make compulsory the practice of Vaccination,"

That the said Act has proved grievously burdensome to a large number of Her Majesty's subjects, who, from observation and experience, object to vaccination.

And seeing that it has failed to secure the benefits proposed,

Your petitioners therefore humbly beg, that your Honourable House will repeal the said Bill, and all others which make vaccination compulsory.

And your petitioners will ever pray, &c.

* The name of the town and county to be inse rted in the blanks.

SALE OF POISONS BILL.

SIR,—This bill contains some provisions which probably will not be considered unobjectionable by some of your readers.

Section III defines "poison" to be "any drug, or substance referred to in the Schedule (A) to this Act, and also any compound, preparation, or mixture containing any such drug or substance, except only such compounds, preparations, or mixtures as are specified in the Schedule (B)."

Section IV empowers the Privy Council to order that any other "drug or substance," not mentioned in the Schedule (A), which, in their opinion, may require it, shall "be subject to the restriction of this Act."

Section V provides that "No person shall sell any poison, on any pretence whatever, unless the sale be made to a person of full age, and in the presence of a witness of full age, who is known to the person selling the poison, and to whom the purchaser is known, and unless there be produced and delivered to the seller, before such sale, a written certificate, signed by the clergyman of the parish or district, or a legally qualified medical practitioner, or a justice of the peace acting for the county or place, and dated, stating that the person giving such certificate knows the applicant, and believes that the poison may be safely supplied to him, and is to be used for the purpose of his trade, or for some other lawful purpose," &c., &c.

Section X provides that the gift of any poison, "whether gratuitously or in exchange for any other article or thing, shall, for the purposes of this Act, be deemed a sale," and subject the giver to the penalties of the Act

The other sections may be passed over as requiring no especial comment.

Several drugs, prohibited in the Schedule (A) are in use as homœopathic (and botanic) medicines, but the only preparations of them exempted in the Schedule (B) from the provisions of the Bill, are those according to the three Pharmacopœias. Surely the preparations, according to the homœopathic formula, are quite as harmless and incapable of being abused to improper purposes, and therefore equally entitled to exemption.

Section V seems unnecessarily stringent. It may operate to prevent a patient from obtaining some wonted medicine on an emergency. He may be taken ill in some quarter were he is entirely unknown, and it might be very inconvenient to him to call in and fee a strange physician. Might it not be remitted to the discretion of a chemist to supply such a passing customer, evincing symptoms of indisposition, with such a dose, to be then and there taken, of his usual medicine, as may be considered an ordinary dose? A similar exemption should be made in favour of any kind Samaritan sharing the contents of his medicine chest with any sufferer, known or unknown, in a case of need. Why should a penalty of fifty pounds be held up in terror even to quench one of the gentle charities of life?

In Schedule (A) is prohibited Lobelia, which, rightly or wrongly, is held by many to be a safe and salutary medicine, and is used as such. The claims of this drug should be freely examined before including it in the schedule.

The power proposed to be given to the Privy Council to insert any other "drug or substance" in the Schedule (A), is exorbitant and unnecessary. Under such a clause, what would there be, except the love of revenue, to prevent them from putting alcohol, tobacco, or anything else, into this schedule, at their own pleasure, or at the request of Neal Dow? Should it hereafter be necessary to amend the schedule, Government should be obliged to appeal to Parliament for the purpose.

Stringent as the Bill is, it is doubtful if it embraces, in its penal clauses, those cases in which, through carelessness, stupidity, or ignorance, a drug is given in too large a dose, or one drug substituted for another, to the injury of the patient.

On the whole it is to be apprehended that the measure, if it pass, will disappoint public expectation. The best security against poison, as against other dangers, is in knowledge, watchfulness, and self-reliance. The law can really do little more than punish the administration of poison, whether through design or culpable ignorance, unless an Act of Parliament could be framed sufficiently strong to put down the numerous familiar poisons which grow so lawlessly in the fields and hedgerows.

I am, sir, your obedient servant,

JOHN GIBBS.

Maze Hill Cottage, June 1, 1857.

IS LOBELIA A POISON?

To the Editor of the Botanical Journal.

Sir,—Much has been written, and much more said, in respect of this matter. The profoundly learned—that is, so far as diploma and official designations give wisdom, and which passes for true knowledge with the majority—how often do we find the most absurd theories promulgated and paraded before the public with a tenacity that would do honour to a truly worthy cause! I remember once attending an inquest in London, some time ago, when one of your agents was summoned before a jury, in consequence of a child having died while under his care. At that inquest the celebrated Dr. Letheby was examined, and his opinion asked if he could assign the cause of death. Without hesitation, he produced a small packet of dark-coloured powder, and, in reply, stated he had taken it from the stomach of the child, and that he had no doubt but the death of the child resulted from that powder: that powder was *Lobelia Inflata*, and consisted of about sixteen grains. Upon cross-examination, he asserted that that herb was a deadly poison. As sixteen grains, according to this *learned savan*, is sufficient to cause death to an infant, then, of course, it amounts to merely a question of quantity to effect the same upon an adult. I have at present, under my care, a gentleman, resident in this town, Mr. J. B—n, who has been under the treatment of our most able allopathists for a long period; his complaint a severe and long-standing liver complaint, the difficulty of his case

being augmented by a general failing of the whole system. Last Christmas he came under my care, and since that period, now six months, he has taken, on an average, four emetics of Lobelia each week, and is, I am glad to record, almost a perfectly healthy man; in truth all but cured. Now I apprehend, if Lobelia was a deadly poison, as laid down by Dr. Letheby, Mr. B. has had a pretty good opportunity afforded him of having his quietus given; but what is the fact? Why, that the patient has thriven upon the source of death. Truly, the wisdom of man is vain, when put in opposition to the result and evidence of facts.

I am, yours truly,
EDWARD CLAYTON.

JUNE AND ITS WILD FLOWERS.

(Continued from page 330).

THE hound's tongue *(cynoglossum officinale)* would attract our notice in the country lane during this month, rather by its great number of leaves, than by its flowers. The dark crimson-brown tint of their blossoms is so rare among our wilding plants, that this alone may serve to distinguish it from others. This flower is altogether of a most sober aspect, and has nothing gay or bright about it. It rarely grows on pasture lands; but when it springs up there, the cattle most carefully avoid it. This is probably owing to its peculiar odour, which has been compared to that of mice.

The yellow rattle *(rhinanthus crista galli)* intrudes itself in many pastures, but is rather local. In some parts of Kent, it is almost unknown; but around Tunbridge Wells, the fields are full of it. In the summer of 1839, it was unusually abundant in Essex, and found on many lands on which it had never before appeared. It not only grows on the meadows, but even among the corn, and it was a source of great annoyance to the Essex agriculturists. The newspapers of the county descanted on the unusual quantity of this plant; which was rendered the more troublesome, as it yields a great abundance of seeds. The country people of Essex had a remarkable prejudice against it, as they thought that its roots emitted some secretion of the plant which burned the roots of the corn. This flower is about a foot high; the stem branched, and often spotted with purple. The plant is very conspicuous, when its flowers are over; for the flat seed-vessels are particularly large. When the seeds are ripe, they rattle in their large husks, whenever the wind blows, or they are shaken by the passing footstep; and when they rattle thus on the fields of Sweden, the peasant concludes that it is time to cut down his grass, and commence the labours of the hayfield. This is not, however, a guide to the English Farmer; for his hay is generally cut while the flower is in blossom, and is stacked by the time its seeds are ripened.

The dwarf red rattle *(pedicularis sylvatica)* and the taller red species *(pedicularis palustris)* are both much prettier flowers than the yellow rattle. Their manner of growth, and the shape of their leaves, as well as the delicate rose tint of their large blossoms, render them very ornamental, either to the heath-land, or the wet, marshy ground, on which they are very abundant.

It is also on moist, boggy soils that that lovely flower, the butterwort *(pinguicula vulgaris)* now droops its head. The leaves are of a very unctuous nature, and are used to coagulate milk. The Laplanders and Swedes pour the milk, warm from the cow, or the reindeer, on these leaves, which gives to it the consistency of cream. They then strain it, and keep it for several days, when it acacquires that acidity which seems very agreeable to the natives of the northern lands. One spoonful of this substance will have the same effect on a fresh quantity of milk; and thus this plant, which is very plentiful in these cold climates, is also very valuable to those who reside in them. The butterwort is more common in the north than in the south of England.

(To be continued.)

MR. HEADLAM'S BILL.

To the Editor of the Botanical Journal.

DEAR SIR,—By the *Times* of Thursday, 14th inst., I see another attempt by Mr. Headlam to fish out who is and who

is not a medical nonconformist. He states before the House that his Medical Bill originated with a number of medical gentlemen, the main object of which is—1st. "*To ensure uniformity of education.*" Is it come to this? that the allopaths, who have vaunted themselves over all the other medical sects, now confess they have not that *competent knowledge* a deluded public supposed they had.

2nd. "That all who have passed the required examination may practise anywhere." Could any one believe, that by a selfish law of their own making (which shows the contraction of their minds), to restrict the natural rights of each other—a law now obsolete, and violated for years past—should be taken any notice of? Well might Lord Elcho compare the remarks of the late Sir Robert Peel, "That there was scarcely a session without a Salmon Bill," with the numerous and clumsy Medical Bills, which have only wasted time and set the profession by the ears.

3rd. "That all who are legally qualified shall, by registration, be distinguished as such." Who does not know, that scarcely did it ever occur that any allopath passed his examination without public announcement of the same; besides, the framed certificate, so commonly seen in the study, surgery or shop window, shows the school in which he has studied. And if his skill does not for him what Thomson's did for him in America, what Priestnitz's has done for him in Germany, and what Dr. COFFIN's does for him in England, then his registration may be but an instrument of evil, which may be used more extensively than we see in the present legal wrong (called right), as evinced most faithfully by J. Gibbs, Esq., in his defence of hydropathy, showing what mean, paltry and dishonourable prevarications are sometimes practised to suppress unrelishable truths in connection with the so-called science of medicine. (See letters from Græfenberg, by J. Gibbs, Esq., 35 to 39.) It is high time that workmen were found not ashamed of the truth, rightly dividing it from error; and if it be true what Dr. Graham quotes, "That a physician knows not his profession until he has thrice filled a churchyard," no wonder they are so soon filled, and new cemeteries are wanted. Dr. Reid corroborates a similar awful statement: "Less slaughter," says he, "I am convinced, has been effected by the sword than by the lancet." If then there are no man-traps under these three objects named by Mr. Headlam, to catch the unwary public, and enthral them, by all means—1st. properly educate them to receive all the truth requisite for a physician: 2nd., to practise it everywhere; and, lastly, be duly registered; and let the people and the Government inspect and decide, from the register sheets of cases treated by this, that, and every other medical sect, which of them is most deserving Government protection; those who, by poisonous potions and lancet, thrice fill a churchyard before competent to prescribe for the sick, or others who disclaim such cruel practices, and do their work more effectually without them. We all remember the uniformity once enforced by law, to qualify men to let horses and sell table beer—the wondrously wise law (now repealed) that he take the sacrament at church; and this Test Act was in force everywhere, and what was its effect? It gave power to tyrants to manufacture hypocrites, and make Britons slaves. But it is certainly too late for Mr. Headlam, whatever may be the fair face given to the Bill, to think a law can be framed, under whatever pretence, which shall further fetter the liberties and insult the common sense of a reading and thinking public. To redeem the character of medical men, and to be registered in the minds of a grateful nation for the real good done in time of need, would further their reputation; and if a law for registration were of use, no doubt the people would demand it; till then, it arouses their suspicion, for they do not yet forget the infamous Vaccination Act.

With these few remarks, I forward seven cases for the register sheet, which shall be continued as time permits, hoping that all my medical brethren may do the same, and take the hint in Dr. COFFIN's last letter, as co-workers in the Botanic Practice, urging the inspection, if not the protection, of Government.

Yours truly,

T. W. STOWELL, M.B.,

Brighton Botanic Dispensary,
Church-street, May 23rd, 1857.

STATISTICS OF MEDICAL BOTANY.—REGISTER SHEET.

(Continued from page 366.)

Name and Residence.	*Age.*	*Ailments.*	*Previous Medical Attendants.*	*When came under Bot. Treat.*	*Present state of Health.*
Ann Baker, Gas-lane, Tunbridge Wells, Kent.	28	General emaciation from natural obstructions caused by cold.	The physicians and surgeons of the infirmary, and others.	March 9th, 1853.	Perfectly good.

GENERAL REMARKS.—This case was of a distressing nature, and of long standing, having received nine years' advice and medicine in vain, with a cough, pain in the side and chest, with morbid uterine discharges, and having the appearance of old age, thereby a burden to her aged parents, who were poor: but by this treatment was restored within six months.

Thomas Hood, Ely-lane, Tunbridge Wells.	26	Violent attack of ticdoloreux in the head, face and neck.	The surgeon of his club.	March 11th, 1853.	Good, having no return since.

GENERAL REMARKS.—His attacks were so severe that they almost bereft him of his senses; receiving no previous relief, and without rest night or day.

Mrs. Caroline Austen, Windmill-field, Tunbridge Wells.	50	Cancer of the breast.	The infirmary.	May 3rd, 1853.	Now in perfect health.

GENERAL REMARKS.—This sufferer, like many others, was driven to me through fear of the knife, having been told at the infirmary that she was just come in time to have her breast taken off, but by local and constitutional treatment was cured within six months.

Miss L. Field, Chapel-place, Tunbridge Wells.	19	Asthma.	Various.	June 4th, 1853.	Excellent.

GENERAL REMARKS.—This patient had been suffering five years; it followed the measles, and she had become so weak that she could not go a short distance without help. Was cured within as many months.

Mr. Edwd. Barnard, Builder, Mount Zion, Tunb. Wells.		Acute rheumatism affecting the head.	None.	August 12th, 1853.	Has not felt it since.

GENERAL REMARKS.—This was no ordinary case, as the patient will gladly testify.

Mr. and Mrs. H., and three children, Tunbridge Wells.	Various.	Itch.	Infirmary, and others.	February 7th, 1854.	All well except the wife, whose other ailments are beyond cure, mercury having destroyed her very bones.

GENERAL REMARKS.—This filthy case deserves note—receiving ingratitude recently for the medicine and advice given as the remuneration with which the unjust law of the land enables the unprincipled to shun their debts to Botanic practitioners.

Miss —— Tunbridge Wells.	26	Ulcerated left lung, and tumour of the breast.	About one month in the Sussex County Hospital, Brighton; one month out, and nine months inpatient at Brompton Consumptive Hospital.	March 24th, 1854.	Quite well.

GENERAL REMARKS.—When brought to me for advice, was so weak and emaciated as to require help to walk; is now married, and the mother of two healthy children. This patient came against her will, and made sport at the attempt with such medicines, after the skilful treatment of the gentlemen at Brompton, to whom she now expresses her gratitude for their best efforts to save, although in vain. She is now a thorough convert to Medical Botany.

A NEW REMEDY.

The Cincinnati *Commercial* says: A German who resides in Mill Creek township, while recently suffering from a pulmonary attack, sent for a physician, who resides on College Hill. In a short time the doctor called on him, prescribed two bottles of cod liver oil, and receiving his fee of eight dollars, was told by the German, who disliked the size of the bill, that he need not come again. The German, who, by-the-by, had not heard the doctor's prescription very well, supposed he could get the oil and treat himself. The doctor saw no more of his patient for some time ; but one day, riding past the residence of the German, he was pleased to see him out in the garden digging lustily. The case seemed such a proof of the virtues of cod liver oil that he stopped to make more particular inquiries about it.

"You seem to be getting very well," said he, addressing the German.

"Yaw, I ish well," responded the former sick man.

"You took as much oil as I told you?" queried the doctor.

"Oh, yaw, I have used more as four gallons of de dog liver oil."

"The what?" said the astonished doctor.

"De dog liver oil dat you say I shall take. I have killed most every fat little dog I could catch, and de dog liver oil have cure. It is great medicine, dat dog liver oil."

The doctor had nothing to say, but rode quickly away, and noticed in his memorandum-book that consumption might be as readily cured with dog liver oil as cod liver oil.

Cultivation of the Cinchona Tree in Java.—We understand that the official report of the cultivation of the cinchona tree in Java has reached Calcutta, and that it is about to be translated for the use of the government. The success of this important experiment is stated to have been complete, and Java may, in a few years, furnish a large supply of quinine to India as well as to Europe. A local journal observes upon this subject:—"It may be as well to remind the government, if really in earnest as to obtaining a supply of this invaluable medicine in their own territories, that two indigenous species of cinchona have been described by Indian botanists. Whatever exertions may be made—and they are not likely to be very great—it must take many years before the South American tree, should it succeed in India, can be large enough for use. In the meantime, why are not experiments made with the bark of the indigenous species? A short time would determine whether its properties are similar to those of the Peruvian tree or not, and the expense of ascertaining this important fact would be a mere trifle.—*Smith, Elder and Co.'s Homeward Mail.*

Punctuality.—A singular mischance has occurred to some of our friends. At the instant when he ushered them on existence, God gave them a work to do, and he also gave them a competency of time ; so much time, that if they began at the right moment, and wrought with sufficient vigour, their time and their work would end together. But a good many years ago, a strange mischance befell them. A fragment of their allotted time was lost. They cannot tell what became of it ; but sure enough it was dropped out of existence ; for just like two measuring-lines laid alongside, the one an inch shorter than the other, their work and their time run parallel, but the work is always ten minutes behind the time. They are not irregular. They are never too soon. Their letters are posted the very minute after the mail is shut ; they arrive at the wharf just in time to see the steamboat off ; they come in sight of the depôt precisely when the train starts. They do not break any engagement, nor neglect any duty ; but they systematically go about it too late, and usually too late by about the same fatal interval. How can they retrieve the lost fragment, so essential to character and comfort? Perhaps like this : suppose that on some auspicious morning they contrived to rise a quarter of an hour before their usual time, and were ready for their morning worship fifteen minutes sooner than they have been for the last ten years ; or, what will equally answer the end, suppose that for once they omitted their morning meal altogether, and went straight out to the engagements of the day ; suppose that they arrive at the class-room, or the workshop, or the place of business, fifteen minutes before their usual time, or that they forced themselves to the appointed rendezvous on the week-day, or to the sanctuary on the Sabbath-day, a quarter of an hour before their instinctive time of going—all would yet be well. This system, carried out, would bring the world and themselves to synchronise ; they and the marching hours would come to keep step again, and, moving on in harmony, they would escape the jolting, fatigue, and awkwardness they used to feel when old Father Time put the right foot foremost, and they advanced the left ; their reputation would be retrieved, and friends, who at present fret, would begin to smile ; their fortunes would be made ; their satisfaction in their work would be doubled ; and their influence over others, and their power for usefulness, would be unspeakably augmented. —*Life in Earnest.*

NOTICES TO CORRESPONDENTS.

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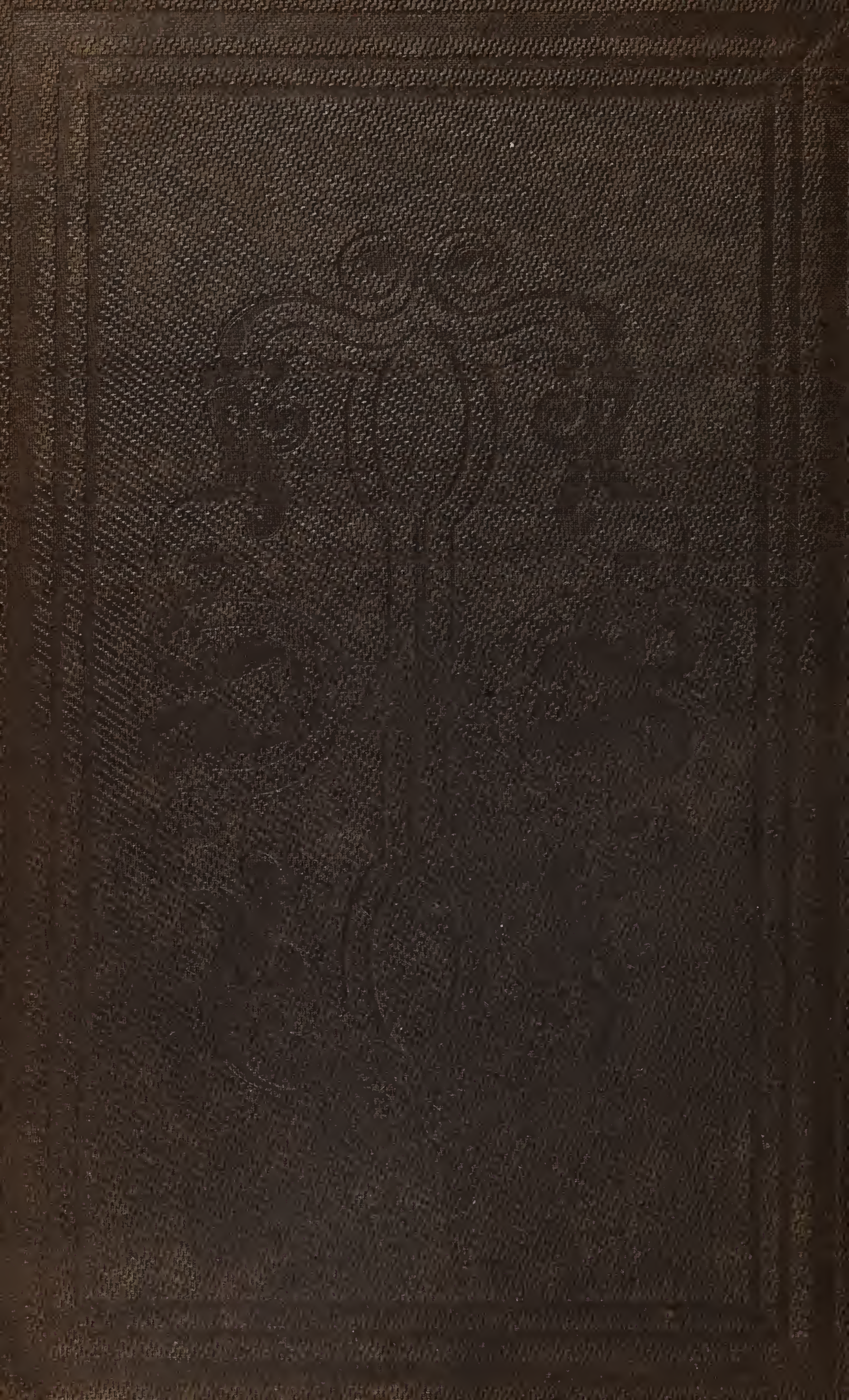
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